167.8, 628, 45-6

THE

Canadian Practitioner.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY

Editors:
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45241
4/5/99.

VOL. XXIII.
JANUARY TO DECEMBER, 1898

TORONTO:
THE PRACTITIONER PUBLISHING COMPANY.

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MANAGER ADVERTISING DEPARTMENT:
MR. W. LLOYD WOOD.

PUBLISHERS :
THE PRACTITIONER PUBLISHING COMPANY,
TORONTO.

VOL. XXIII.] JANUARY, 1898. [No. 1

Original Communications.

APPLICATION OF THE PRINCIPLE OF OSMOSIS TO THE TREATMENT OF TOXÆMIA.*

(A Preleminary Report.)

BY WALTER MCKEOWN, B.A., M.D., M.R.C.S. ENG.
Assistant Surgeon St. Michael's Hospital, Toronto.

SUPPOSE we have two fluids, say water and a saturated solution of sulphate of magnesia, separated only by an animal membrane, for instance a piece of bladder wall, although the bladder wall may be impervious to water alone, and to a saturated sulphate of magnesia solution alone, yet when these two fluids are on either side of it an interchange takes place, the water passes through into the salt solution and the salt solution through into the water, carrying the dissolved sulphate of magnesia with it. This will continue until the fluids on both sides have attained an equal degree of saturation. This is known as the law of osmosis, and all crystalline

* Read at a meeting of the Toronto Medical Society, December, 1897.

bodies (as distinguished from colloid) have the power of so passing or dialysing through an animal membrane, provided the opposite side of the membrane is in contact with a fluid of a less or greater degree of concentration.

When any pathogenic micro-organism begins to reproduce itself in the human body it forms a poisonous product known as a toxin, and concurrently, I am not prepared to say simultaneously, an anti-toxin is formed. Speaking broadly, the toxin kills, the anti-toxin cures. The great majority of specific diseases, did the patient not die overwhelmed by the toxin, would necessarily terminate at the time when sufficient anti-toxin was produced to overcome the toxin and its producer the micro-organism. This must be true, else there is no reason why a specific organism should not, once it obtained a foothold, go on reproducing itself indefinitely.

Further, it will probably be generally admitted that the less toxin present the less anti-toxin necessary to overcome it, and the greater likelihood that the anti-toxin and the normal germicidal action of the blood serum—the natural resistance, or whatever we may wish to term or consider it—will bring about a more rapid and favorable termination.

There is a peculiar difference in their osmotic power between toxins and anti-toxins. Toxins will dialyse, anti-toxins will not. We have here, then, a method of separating these bodies. Over two years ago I evolved the following plan which I thought would draw off the toxins, leaving the anti-toxins undisturbed in the circulation. I purposed diluting the blood by injecting directly into a vein deci-normal salt solution and filling the rectum with a saturated solution of sulphate of magnesia. To retain the fluid in the rectum a pneumatic plug is used, through which passes a large afferent and a small efferent tube with a stop-cock. I reasoned that I had here everything necessary for dialysis, two fluids of different degrees of concentration (the blood and sulphate of magnesia solution) on either side of an animal membrane (the wall of rectum), and two bodies capable of osmosing through this wall, the toxin and the sulphate of magnesia. I explained my theory to a number of medical men in Toronto, hoping that they would encourage me to try if it would work out practically. No one disputed that my theory was plausible enough, but although I tried several times to put it into practice upon suitable cases at St. Michael's Hospital, the suitable case never came in a patient under my own charge, and the other men had apparently not enough confidence in my theory to allow me to exploit it on one of their patients.

However, everything comes to him who waits, and I got my case at last.

Case 1. Mrs. B., German-Canadian, 30 years of age, was admitted to St. Michael's Hospital in October last. The case had been diagnosed and treated outside for three months as "typhoid fever." For a couple of weeks after admission the patient showed a septic temperature, the evening reading varying from 1° to 4° above the morning, but falling gradually. At the end of two weeks it again rose, and as the patient showed severe constitutional symptoms of sepsis and a large mass could be made out on the right of the uterus, Dr. J. F. W. Ross, under whose care she was placed, diagnosed pus-tube and determined to operate. Operation was fixed for November 9, but the evening before Dr. Ross was called to a case of appendicitis at Belleville, and the operation was consequently postponed until the morning of the 10th. Examination under anæsthesia showed a diminution in size of mass. On opening the abdomen pus squirted out in a regular jet. The patient was in such bad condition that the anæsthetist was afraid she would die on the table, and as Dr. Ross thought so also, he hurriedly packed the wound with iodoform gauze without either irrigating or wiping the abdominal cavity, introduced a few sutures at the lower angle of the wound and brought the end of the gauze drain out through an opening about two inches long, which he left in the abdominal wall. I had assisted at the operation, being Dr. Ross' regular assistant at St. Michael's, and as it seemed an utterly hopeless case I asked to have the patient placed under my care for the purpose of demonstrating my theory. The time occupied by the anæsthesia and operation was only half an hour, and she was returned to the ward in a collapsed condition with a small poor pulse of 150. As soon as she was placed in bed I cut through the skin over one of the veins of the arm, exposed the vein freely and picked it up in a pair of dressing forceps. I had a quantity of deci-normal salt solution prepared and had also ready a piece of rubber tubing to which I attached at one end an ordinary glass funnel, and to the other a needle which I borrowed from an aspiration case. After running the salt solution freely through to ensure absence of air I pushed the needle into the vein and allowed the solution to flow in, which it did rather slowly on account of the small opening in the needle. However, filling the funnel as often as it emptied I introduced a pint and a half (30 ozs.), I covered my wound with some gauze, and as I had not prepared my rectal irrigator according to my original idea I ordered a cupful of saturated solution of sulphate of magnesia

to be introduced high up into the bowel. Forty minutes afterward she had a severe chill, and her condition became such that it was thought she was dying, becoming cyanosed and pulseless. At 5 o'clock the same day her pulse was still 150. I again injected into the same vein and through the same opening 1½ pints of solution, and again a cupful of saturated mg. sulph. solution. She again had a severe chill, lasting fifteen minutes, the temperature rising to 104° for a short time, and then rapidly falling to normal, and at 7 o'clock in the evening her temperature was 100° and pulse 114. Next morning (Nov. 11th), I again used salt solution in the blood and mag. sulph. in the bowel. The temperature came from 100° to 99°, and the pulse from 132 to 120, remaining about the same until 2 a.m. of Nov. 12th, when her temperature went to 102°, but the pulse was only 116. The patient seemed so well that I did not use the treatment again, the pulse keeping good, although the temperature went as high as 103°, until the morning of the 13th when I injected into another vein (the one I had previously used was obliterated by a firm clot) a quart of salt solution, and as I found that the saturated solution of magnesia sulphate was too irritating and had produced very free purging, I ordered two ounces of sulphate of magnesia in six ounces of warm water, to be introduced into the bowel instead of the stronger solution. The result was the same. The temperature dropped to normal after a prolonged chill (during which it reached 104°), and the pulse improved. The temperature remained normal until 2 o'clock on the afternoon of the 14th, when it registered 102° and 103° by 6 p.m.; the pulse was 122. At 8 o'clock that evening (14th), I repeated the treatment. A chill followed, the temperature rose to 104°, and then dropped to normal. The next time I used it was at noon on the 15th. I tried the same vein I used at the previous injection, and pushed my needle through the thrombus, but apparently the point went out again through the wall of the vein, and the solution went into tissues. The arm swelled to a great size, and at 6 o'clock the temperature was 102°, a drop of one degree. This was the only time the temperature did not come down to normal, the only time the patient did not have chill, and the only time she complained of any pain following the injection. She, however, now complained most bitterly of the pain of her arm, and did so for several days subsequently. I used the treatment again on the 16th, 17th and 18th, the temperature coming down after a chill to normal from 101° to 103°, and the pulse dropping 20 or 30 beats in the minute. During all this time the patient felt well. *She never vomited*, and took her nourish-

ment well. On the fifth day I removed the packing. (I did not think it well to remove it sooner for fear that the intestines would protrude if adhesions had not formed). I sucked up with an ordinary glass syringe a large quantity of pus free in the abdominal cavity, and after I was through the patient informed me that she was hungry and would like some chicken. She took a large quantity of milk daily after the first twenty-four hours, also egg nogg and scraped beef. Since the 18th of November to the present I have allowed nature to combat the toxins, washing out the wound with formalin, 1 in 500, through a uterine irrigator, which I selected as being the handiest instrument for my purpose, and which I could at first push in about eight inches down into the pelvis. She has gradually improved, and although the wound in the abdomen is still open I can introduce the irrigator only an inch and a half. She both feels and looks well, and is taking solid food, can move herself readily about in bed, and although her temperature is a little up her pulse is never over 100. In a few weeks she will be up and well. She received no medication whatever except strychnine sulphate gr. $\frac{1}{30}$ four times daily.

An examination of the pus, kindly made for me by Mr. J. J. McKenzie, of the Biological Department, Toronto University, showed a pure culture of staphylococcus P. aureus, although from the stench of the pus I thought that the bacillus coli communis would have been found in abundance.

Emboldened by my success in this case, I tried it in Case 2.

Case 2. Wednesday evening, Dec. 1, during my absence, a message was sent me to go to a woman who had engaged me to attend her in confinement. She was 35 years of age, mother of several children, and a fairly healthy woman, with the exception that she was troubled with asthma. It was about two hours after the message came when I returned, and I went immediately to the house. I found that another medical man had been called in, and that everything was over. She had a short labor, and the child was born ten minutes after the doctor had made his first and only examination. The after-birth came away without any trouble. I arranged with the gentleman who attended her that I would go on with the subsequent attendance. Next day, December 2, she was very well indeed. December 3, I called in the afternoon and found her suffering from a severe chill, temperature 104°, pulse 130. I gave an intra-uterine douche, and ordered free purgation with sulphate of magnesia. I was sent for the next morn-

ing at six o'clock, and found her temperature 105° and pulse 140. She complained of severe pain during the night in the uterine region, and although there was no distension I suspected the disturbance was septic, and without any further examination advised her removal to St. Michael's Hospital.

On making a more complete examination there I found some dulness over the back of the right lung and crepitant rales over a considerable area. She had no pain, her temperature remained high, and the pulse was rapid. Bronchial breathing developed in the apex of the right lung (I was unable to detect any at the back). During afternoon of Dec. 6th her pulse, which was about 120 on admission, went up to 136 and the temperature to 105°, and I determined to use the saline solution in blood and sulphate of magnesia in bowel, but as the pulse had gone down to 120 a few hours afterwards and before I returned to the hospital I deferred it until the afternoon of the 7th (fifth day of disease): pulse 138, temperature $105\frac{2}{5}°$, patient very restless and delirious, cyanosed and apparently in very bad condition. I injected 1½ pints of salt solution into a vein in the arm, ordered an injection of 3 ozs. of magnesium sulphate in 8 ozs. of warm water in the bowel, to be repeated if not retained for more than 15 minutes, and left her. She had a chill, the temperature rose to $106\frac{4}{5}°$, but in four hours was $98\frac{2}{5}°$ and pulse 100. She fell into a deep sleep and slept all night. The next morning (Dec. 8), the sixth day of the disease, the temperature was 97°, pulse 96. The patient said she felt well and asked for some bread and butter. Much to my surprise the temperature remained normal or sub-normal all the next day, the pulse kept below 100, and the patient seemed remarkably well. The next morning at six o'clock (thirty-six hours after treatment), the temperature was still normal, and pulse 96. At ten o'clock of the same day it rose to $101\frac{2}{5}°$, at one o'clock it was $106\frac{3}{5}°$. The pulse also rose rapidly to 160 and 180. The woman was apparently dying, and I hurriedly again introduced saline solution and sulphate of magnesia, using the same quantity of each as at the previous treatment. She again had a chill and temperature dropped, although not as rapidly as at first, to 101°, and the pulse came down to 136. At about midnight of the same day I used the treatment again. Next morning the pulse was 120, temperature 101°, which gradually fell to normal, and the pulse forty-eight hours after the last injection was 80. Pulse kept below 80, and temperature normal or sub-normal for three days when it again ran up to 104°. Her general condition was, however, good, and after a high evening temperature and

morning remission lasting for about a week, pus was discharged per vaginam, the temperature came down and has remained normal since. Vaginal examination revealed a great deal of inflammatory thickening in pelvis. She is at present in excellent health and tells me her asthma is better than it has been for years.

The two cases have convinced me that my theory is correct, and that it will work out in practice. I quite realize that my pneumonia case might have recovered anyway, although after a pulse-rate of 180 and temperature of $106\frac{2}{5}°$, it would have been remarkable. I also realize that my case of purulent peritonitis might have recovered under the ordinary treatment, although I would characterize such a result as extraordinary. It is not upon the fact that they recovered that I place my faith. It is upon the fact that my treatment is based upon the mechanical application of a natural law, the surest of all foundations, and upon the fact that, although I have treated only two cases, marked improvement followed immediately upon the use of saline and magnesia sulphate, and that there can be no doubt in the world that the treatment and the improvement bear the relation of cause and effect.

Let us consider that as a rule pathogenic micro-organisms do not inhabit the blood—their growth takes place and their toxins are produced in the tissues. How do they get into the circulation? Through the lymphatics. Going further, how do they get into the lymphatics? It is true stomata exists in the walls of the lymph capillaries of the serous membranes, and this may, to some extent, explain the very rapid absorption from these surfaces, but I do not think that there is very good ground for the belief that stomata are present in lymph capillaries of other parts. Now, if there are not stomata, toxins can get into the lymph ducts in no other way than by osmosis. This theory will, to my mind, better than any other explain the circulation in the lymphatics, because, as we know that if, for instance, we have a jar divided into two halves by an animal membrane, and solutions of different degrees of concentration on either side, if we fill each side so that the fluids are at a level the less concentrated will pass into the more concentrated at a greater rate than the reverse will occur, and consequently the level of the more concentrated is forced above its original level, and the less concentrated falls below it. This probably takes place in the lymphatics, the osmotic power forcing the fluids onward, and the peculiar construction of the lymph channels keeping as they do nearly the same calibre throughout their course would further favor this; the circulation in these being more rapid than if they

widened out as do the veins. If toxins will pass through the wall of the lymph capillaries they will do the same through the wall of the blood capillaries, and so they are thrown out of the circulation. Anti-toxins on the other hand are possibly produced within the blood current, and as they have not the power of dialysing they remain there for at least a considerable period of time. Now we can readily imagine that if toxins are thrown off by dialysis a large quantity of the fluid constituents of the blood passes out at the same time. Furthermore, the formation of pus in a large abscess cavity, for instance, must drain off a large quantity of serum from the blood stream. These two conditions acting together must tend to a considerable concentration of the blood itself, and we may judge this to be the case by looking at the hard, dry, brown tongue of a patient suffering from toxæmia. In suggesting the dilution of the blood I am helping nature's method of getting rid of these poisons. The solution of mag. sulph. in the rectum still further aids and ensures that once the toxins are thrown into the bowels they will not be left there for possible re-absorption but will be carried off at once.

If I am correct in my surmise the application of this process offers wonderful possibilities. Death from toxæmia is probably much more common in the specific diseases than is death from any other cause. Whether subsequent investigation will bear me out or not I am unable to say, but making all due allowance for the likelihood of being carried away by my own idea I feel certain it will. I quite realize that many modifications may occur to me or suggest themselves to others as regards the method of applying the principle of osmosis. For instance, my friend, Dr. Graham Chambers, of this city, who was one of my first converts to the theory, has used continuous irrigation into the bowel with a stronger salt solution in two cases of general peritonitis with ileus and obtained most gratifying results. Again, it has occurred to me that the same principle m igh be carried out by immersing the patient in water, and I see no reason why osmosis should not under those circumstances go on readily through the skin. I think warm water would be best, no matter how high the temperature, both because it would be more agreeable to the patient and because it would determine more blood supply to the skin, and consequently hasten elimination by osmosis. Some such method as this, if found to work practically, would be very valuable in milder cases of toxæmia where opening a vein might seem heroic, or even in the more severe, when there was no immediate danger of death.

The application of the principle is enormous and would prove use-

ful not only in the toxæmia due to specific disease, but in rheumatism, in uræmia, in poisoning by alkaloids, in fact, in any condition in which a poison is present in the blood, which is capable of being dialysed through the capillary wall, we are in a position to assist nature at a time when under ordinary methods of treatment, we are quite helpless.

I will report whether my success be good or ill in future cases, and I am especially anxious to determine whether total immersion of the patient for a long time will drain off toxins. As to Dr. Chamber's modification, I am afraid that thorough irrigation of the bowel could not be carried on well in any condition except in one in which paralysis of the bowel was present.

I have been asked how I account for the chill following saline injection. It seems to me the explanation is obvious—a condition of equalization has taken place between bodies capable of dialysis without and within the blood current. Dilution of the latter necessarily means a rapid increase from without. Hence chill ; but toxins so absorbed are rapidly eliminated, and as the supply in the tissues has undergone a sudden diminution a fall of temperature follows which continues until a new supply is elaborated.

I have purposely refrained from bringing in the action of the kidneys in this paper. I am not prepared to say whether their action is a large or small factor in carrying off toxins, but I may say that in my first case I used three pints injected into the vein, within about seven hours. The nurse, following the usual routine, did not pass the catheter for eight hours. At the end of that time in spite of the large quantity of fluid injected directly into the blood she drew off only six ounces of urine.

In conclusion let me say that I may be only groping ; but of this I am certain that I am groping in the right direction.

80 McCaul Street, Toronto.

CARCINOMA OF THE STOMACH WITH SUBCUTANEOUS METASTASIS.*

By Dr. H. J. Hamilton,
Toronto.

MRS. D., æt 60, under the care of Dr. McCoy, of St. Catharines, and seen in consultation by Dr. Graham, to whom I am indebted for the specimen and clinical notes.

(1) Good health until about four years ago, when she complained of digestive disturbance.

(2) In March, 1897, definite symptoms of tumor presented.

(3) Digestive symptoms, continuous emaciation resulting.

(4) Pains never marked during her illness, but constant tenderness over the stomach.

(5) Hæmatemesis—on Sept. 10th.

(6) No further vomiting of blood nor of anything else until a short time before death.

(7) Nausea always intense.

(8) Constipation prevailed throughout.

(9) Blood in stomach tube when it was used.

(10) The patient was much emaciated and presented a great many subcutaneous nodules varying in size from that of a pea to that of a hazel-nut. These appeared about six weeks after the symptoms pointed to tumor of the stomach, tended to multiply rapidly, and did not grow much larger as time advanced. They were not very painful. There were more on the trunk than on the limbs, but still were very numerous in the latter situations.

(11) Tumor could not be felt distinctly. Size of the stomach not changed. Lymphatic glands not appreciably enlarged.

Diagnosis: Sarcoma of the stomach was thought probable on account of the subcutaneous nodules, but the fact that the symptoms all pointed to a primary affection of the stomach prevented a diagnosis of sarcoma being made.

Died November 13, 1897.

* Read at meeting of Pathological Society.

Post-mortem: A large somewhat hard mass involves the whole stomach with the exception of a small area at the cardiac end. The walls are uniformly thickened, the greater and lesser curvatures being equally affected. The cavity is diminished in size. The lumen of the pylorus is less than normal, but not markedly stenosed. The stomach has been opened along the greater curvature and shows a large ulcer about midway between the pyloric and cardiac orifices. Peritoneal glands involved. The pancreas is adherent and implicated.

The spleen was adherent but not involved. These organs were all adherent to the abdominal wall. The liver was not affected. Heart and lungs normal.

Microscopical examination: Section from the cardiac end of the stomach and from the greater curvature near the pyloris, show marked proliferation of epithelial cells. The structure of the mucous membrane is lost. The greater amount of cell proliferation is in the submucous coats, but the muscular and serous coats are also involved. In some places there is more fibrous tissue than in others.

The subcutaneous nodules present a similar appearance. The spleen and liver are not involved. Sections of the pancreas show it to be infiltrated with epithelial cells.

The point of interest is the presence of the subcutaneous nodules, which are undoubtedly of the same character as the growth in the stomach. In this case the clinical picture was that of sarcoma. The metastasis cannot be explained by saying that there was transmission through the lymphatics; it must have been through the arteries. Osler records two cases in which subcutaneous cancerous nodules were found in cases of carcinoma of the stomach. It is not stated whether there were secondary growths in the liver and lungs or not. Dr. Findlay records a case which he presented at the Pathological Society of London, in which there was an epithelioma of the stomach, with secondary growths in the lungs, liver, suprarenal capsules, as well as in the subcutaneous tissues. It is somewhat difficult to say how subcutaneous metastasis could occur without the liver being involved, but two possible theories offer themselves for consideration. While, as a rule, the blood from the lesser curvature of the stomach passes almost entirely into the portal vein, sometimes the coronary vessel fails to communicate with the latter, but empties directly into the ascending vena-cava, thus giving transmission by blood vessels to the right side of the heart, and to the pulmonary capillary area without the intervention of the liver. The cancer medium might then pass to the left heart, and reach the

general circulation without even involving the lungs. In a case o sarcoma of the stomach, presented at this Society a year ago, by Dr. H. B. Anderson, there was involvement of the supra-renal capsules, the right auriculo ventriculus valve, and also two growths in the brain with no metastasis in the lungs or liver.

According to the second theory, the cancer particles, whether fluid or solid, may have reached the blood stream, being carried directly from the abdominal glands by the thoracic duct, to the left side of the heart. This is the more probable explanation.

CASES OF MECHANICAL OBSTRUCTION IN THE FEMALE PELVIS.

By T. K. Holmes, M.D.,
Chatham, Ont.

THREE cases of mechanical obstruction in the pelvis of sufficient magnitude to interfere with childbirth have given me much anxiety, and have seemed to me of sufficient importance and interest to be published. Deformity of the pelvis is not common in this country, and it is not to such cases that reference will be made in this article, but there are others and minor cases of obstructed labor which may be overcome sometimes, quite easily, if one is prepared to act promptly; but if such a case be presented for the first time unexpectedly it is not always possible to be prepared to meet it in the best way, or, indeed, to decide on the spur of the moment what is the most judicious course to pursue.

The first case occurred in the early years of my practice. The woman was a multipara and 38 years old. I had attended her in a labor in 1876, and had then delivered her, with great difficulty, of a living child by means of forceps. I then discovered a small hard mass springing from the sacro-iliac synchondrosis which I believed to be an enchondroma. She made a normal recovery and became pregnant again in 1880. Labor came on at full time and I was called to attend her. The mass had increased in size somewhat since her former labor, but I thought there was still room to deliver the child, the shoulder preventing, by postural version. This I did and succeeded in getting the head through the narrowed canal. The child was dead, the mother did not rally well and on the following day had a frequent weak pulse and a general bad appearance. Forty-eight hours after delivery a gangrenous spot as large as a silver dollar appeared about the location of McBurney's point, and within twenty hours more this had increased to the size of the top of a pint cup, and numerous smaller gangrenous spots had appeared on the thighs. No treatment availed, and she died in 88 hours after delivery.

I had cautioned this woman against becoming pregnant after the previous labor, and, as she was somewhat advanced in life, I thought the chances of her becoming so were rather remote. If I had known of her last pregnancy in time, the induction of labor prematurely would have been the safe course. When full term had been reached, I doubt if any better course could have been pursued than the one adopted. The removal of the ovaries in a woman having this form of obstruction would be justified, if on opening the abdomen removal of the tumor were found impracticable.

The second case was a primipara, and the first stage of labor was completed when I first saw her. A solid tumor as large as an orange was pressed firmly down into the hollow of the sacrum by the advancing head. It seemed so small that I thought delivery by forceps could be accomplished, but a trial soon convinced me that this could not be done. Drs. Fleming and McKeough were sent for, and, as a result of the consultation, craniotomy was performed, and the child delivered in that way. Two months later I removed the growth, which proved to be a solid fibroid tumor, occupying the posterior part of the cervix. A subsequent labor was free from difficulty, both mother and child doing well. When this child was ten years old the mother came under my care for melancholia, and examination revealed another fibroid similar in size and location to the first. This I removed by enucleation, and felt sure the melancholia would be cured by the operation. In this I was disappointed, and on examining her again two months afterwards another fibroid as large as a hen's egg was found occupying the posterior and lower segment of the uterus wall and encroaching on the cervical tissue. This I removed by means of Thomas' scoop, and her recovery from melancholia was then rapid and complete.

I have on several occasions observed cervical fibroids complicated with melancholia, and their removal has in every case been followed by disappearance of the mental depression. A singular circumstance connected with this case was that her mother and two of her sisters consulted me on account of tumors of this kind, the mother's being in the palm of the hand, one sister's on the thigh, and the other sister's on the abdominal wall just below the ensiform cartilage.

The third case occurred in a woman about twenty-five years of age, who had one child three years old. She had been in rather poor health for nearly a year, and for several months her temperature had been 100° F. every evening, and her pulse 90. While in this condition she became pregnant, and as her symptoms resisted

the treatment prescribed by her attending physician, Dr. Dewar, of Windsor, he kindly referred the case to me for examination. She came to me in November, 1896, and aside from the increased temperature and pulse, presented a healthy appearance. Examination for tuberculosis in any part of the body was negative, but a vaginal examination enabled me to detect a firm mass in Douglas' cul de sac and more to the right side of the pelvis. The presence of this, taken in connection with the pulse and temperature, led me to suspect pyosalpinx, and I wrote to Dr. Dewar, suggesting the emptying of the uterus, for it seemed certain that if it were pus labor would rupture it and kill her, or if it were not pus, it would prevent delivery by the natural way. I further suggested that he ask Dr. Donald McLean, a very experienced surgeon of Detroit, to examine her and to get his independent opinion. This was done, and Dr. McLean was of opinion that it was pyosalpinx and that it should be removed through an abdominal opening.

The patient was placed in Harper's Hospital in Detroit, and I was invited to perform the operation, which I did on the 18th of November, 1896. She was, at the time of operation, between three and four months pregnant.

On opening the abdomen and exploring the pelvis with my finger, I found a hard mass springing from the right posterior aspect of the uterus just above the vaginal junction. Without much difficulty I incised the capsule and enucleated the growth. I then closed the cavity left by the tumor by means of a continuous fine silk suture, which completely controlled the bleeding, and closed the abdominal wound in the usual way. The patient vomited a good deal for two or three days, and there was a slight discharge of blood from the vagina on the second and again on the fourth day after the operation. She made a good recovery, and was confined on the 29th of May, 1897. The labor was normal in every particular, and the child weighed ten pounds. The most difficult things to account for in this case are the temperature and pulse, which continued about the same during the whole term of gestation and even after confinement they did not become normal as late as July. I have not learned her condition in this respect since.

THE PLACE OF THE STATE IN DEALING WITH TUBERCULOSIS.*

By Peter H. Bryce, B.A., M.B.,
Secretary of Provincial Board of Health, Ontario.

(Abstract of Paper.)

PRIOR to twenty-five years ago all laws dealing with what are now called social subjects, especially relating to systematic state or municipal supervision of public health, were very crude in European countries, or neglected altogether in America. The cause is easily understood, for it was in 1850 that Davaine began his investigations into the origin of charbon. Pasteur recognized its spores in 1863; Koch advanced it a stage in 1870, which were concluded by Pasteur himself in 1877; thus was the germ theory of disease established, and the basis for modern medicine and public hygiene immovably constructed. Five years later Koch discovered the bacillus of tuberculosis, which in varied form attacks alike the infant, the growing youth or maiden, or those in the prime of life, almost since creation's dawn.

Statistics taken from almost any country will abundantly illustrate this; but, taking those of Ontario, as seen in the following, we obtain abundant food for thought:

ONTARIO STATISTICS.

Deaths from tuberculosis in Ontario in successive census years:

1871—1,042, or 11.2 per cent. of all deaths.
1881—2,397, or 10.8 per cent. of all deaths.
1891—2,463, or 11.4 per cent. of all deaths.

Deaths from tuberculosis in Toronto in 1890-1896:

1890	387
1891	430
1892	477
1893	512
1894	442
1895	430
1896	442

*Read before the American Public Health Association.

Total deaths from tuberculosis in United States in 1880, 91,551, or a little better than 12 per cent. of all deaths having reported causes ; 1890, 101,903.

Divided as follows in 1890 : North Atlantic division, 37,443, or a ratio of 2.2 per 1,000 population ; south Atlantic division, 14,670, or a ratio of 1.7 per 1,000 population ; north central division, 29,922, or a ratio of 1.3 per 1,000 population ; south central division, 15,304, or a ratio of 1.4 per 1,000 population ; western division, 4,564, or a ratio of 1.5 per 1,000 population.

MORTALITY IN ASYLUMS.

Table of returns of Ontario asylums, giving inmates, admissions, annual deaths, and percentage of deaths from tuberculosis :

Year.	Inmates.	Yearly Admission.	Annual Deaths.
1871	1,366	166	62
1881	2,584	161	166
1891	3,865	308	190
1892	3,985	125	211
1893	4,174	189	243
1894	4,334	160	241
1895	4,557	223	309

Table giving the total deaths in Ontario asylums (exclusive of Mimico) during 1892 from tuberculosis, in a population of 4,231, the total deaths from all causes being 211 :

Residence.	Total Deaths.	From Tuberculosis.	P.C. of Total.
Under 1 year	72	7	9.7
Bet. 1 and 2 years	25	5	20 0
Bet. 2 and 3 years	40	9	22.5
Bet. 5 and 10 years	19	10	52.6
Bet. 10 and 15 years	16	6	37.5
Bet. 15 and 20 years	15	2	13.3
Over 20 years	24	2	8 3
Total	211	41	23 4

In examining this table it is seen that nearly 2,500 persons die in Ontario from this dread disease, or more than ten times as many become affected every year with tuberculosis as with insanity, and ten times as many die. This does not take into account those deaths registered as due to diarrhœa, chronica, atrophia, anæmia, and so on.

In Ontario the Legislature has since 1826 been gradually extending the scope of its charities until in 1874 there were 10 hospitals with a per diem grant of 30c.; 4 refuges with a per diem grant of 7c.; and 13 orphanages with a per diem grant of 2c. This has further increased to 39 hospitals, 32 refuges, and 31 orphanages in 1896.

The population of these institutions increased as follows:

	1878.	1896.
Asylums	1,366	4,709
Hospitals	4.372	17,517
Refuges	1,300	4,355
Orphanages	1,356	3,995

The cost of maintenance also increased:

	1871.	1895.
Asylums	$173,611	$595,843
	1878.	1896.
Hospitals	$93,067	$421,809
Refuges	51,176	193,160
Orphanages	11,223	116,570

Of which the Government in 1896 paid:

Hospitals	$110,082
Refuges	51,306
Orphanages	15,594

Ontario was practically settled in 1871, and the increase of population since has not been rapid, and if the cost of erection of the institutions to house these unfortunates many millions more would be added to the yearly cost. The province has spent on asylums alone since 1867 the sum of $9,854,479.

In the hospitals for 1896 some 430 persons were treated for tuberculosis, of which 25 per cent. died. Public aid is therefore given to a few cousumptives in Ontario.

In New York we find that of every 1,000 deaths between the ages of 15 and 60 years, or the productive years of human life, there died 373.9 persons of tuberculosis. This percentage of 37 will be found to be nearly correct for all large cities in temperate climes.

Applying the calculation of Guerrard it follows that in 1895 in Ontario, there was $2,472,000 of an economic loss from the deaths from consumption alone.

It is conceded that proper treatment in sanatoria will save at east 50 per cent. of the cases of tuberculosis. Hence an annual

saving of some $2,472,000 for Ontario alone would result. Many other results of an economic character, such as the cost of sickness, loss of time through nursing, might be added, but these suffice to indicate the nature of the problem.

How far state intervention with regard to this disease is practicable must be, then, determined by expediency, and the circumstances of time and place. The state cares for other defectives, but as yet the aid given to those affected with tuberculosis is practically nothing.

Is, then, intervention of state and municipal government in dealing with tuberculosis expedient? And, if so, is it practicable?

Compulsory notification is beneficial to lessen the danger from contagion and to furnish suitable data upon which to base calculations, but much as may be done by making the houses sanitary, yet until we have suitable sanatoria for the treatment of these persons no great results will be seen.

THE TREATMENT OF CONSUMPTION.

The several classes of charitable institutions have been indicated, and the argument the paper points to, is that institutions partaking of some of the characteristics of each, are demanded as a means by which we shall begin the systematic attempt to combat the ravages of tuberculosis. Hospitals exist in all of the large cities for the relief of all acute, and many chronic, diseases, and it is now time for the state to recognize the necessity of making an effort to combat the spread of the disease and to open hospitals for the systematic treatment of the tuberculous poor.

What is needed, so far as Ontario at least is concerned, is not so much an increase of expenditure, but something of a readjustment to meet the changed conditions. As soon as we recognize that the true place to treat this disease is in proper homes, then can we ask the state to assist the private philanthropy already bestowed. Ontario has been the first to recognize the justice of the claim, and has made the per diem grant of the general hospitals apply to the Home for Consumptives at Gravenhurst.

Every city or county in Ontario could provide a suitable home within a reasonable distance for this work, and the cost per week need not exceed, to any great extent, $6 as at Saranac Lake.

In the asylums of Ontario one-sixth of the cost of maintenance is collected from nineteen per cent. of the patients; *i.e.*, from the paying patients. With a shorter residence for consumptives the proportion of paying patients would be greater.

The choice of location is important for the "Homes"; but the voice of the Moscow Congress was for air-cure and hygiene.

But the era of experimentation in dealing with tuberculosis has gone by. As Aeneas, driven by the fury of Juno for years over tempestuous seas before he reached Italy and the dear Lavinian shores, so succeeding generations,

> "Multos per annos
> Errabant acti fatis maria omnia circum."

Men have exploited nostrums of every kind, being driven by the Parcean fates to spin and unwind the thread of life like Clotho, and to imitate Lachesis by casting lots if perchance they might throw a number which would bring life and healing, only at last to find themselves in the unalterable, unrelenting hands of Atropos the Unchangeable. All these years have people been blinded to the simple truth that instead life has been in the air and sunshine around them.

The age of practical sanitation has come! Gentlemen of the association, this great work in the cause of humanity is in your hands, I leave it with you.

In the works of the greatest poet of scientific evolution, our late beloved Laureate:

> "O ye the wise who think, the wise who reign,
> From growing commerce loose her latest chain,
> And let the fair white-winged peacemaker fly
> To happy heavens under all the sky,
> And mix the seasons and the golden hours
> Till each man finds his own in all men's good,
> And all men work in noble brotherhood."

Selected Articles.

MITRAL STENOSIS.*

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IN order to understand the effect of mitral stenosis, it is essential that the morbid changes in the heart should be clearly understood.

Morbid anatomy.—There are two forms of mitral valve stenosis; that in which the orifice is in shape crescentic or button-hole, and that in which it is round and funnel-shaped. But very often a transition between the two is found, and then, when looked at from above, the orifice is somewhat button-hole in shape, while from the ventricular aspect the depression of the valve segments gives it a funnel-shaped appearance.

Button-hole mitral.—The adjective "button-hole" refers, it must be remembered, to the shape and not to the size of the orifice. It is to be regretted that sometimes it is used as if it was synonymous with a much-contracted valve, and is employed much in the same way as the expression pin-point pupils is with regard to the condition of the pupils in extreme myosis. This is inaccurate, for every contracted mitral is not button-hole, and indeed many of the most narrowed orifices are not button-hole mitrals.

Normally in systole the edges of the mitral valve segments meet along a curved line, so that the closed orifice is button-hole in shape; when the valve segments become thickened and rigid, and retain this their normal position in systole, a button-hole slit is left.

Generally speaking, chronic valvulitis would, by cicatrization and contraction of the valve segments, lead to their becoming puckered and retracted, so that simple mitral reflux and incompetency would result. If, however, the extremities of the adjacent valve segments become united by vegetations, and so welded to-

* From a Clinic at St. George's Hospital, October 21st, 1897.

gether, retraction seems to take place towards the centre of the orifice, or to be concentric, rather than from the centre of the valvular orifice, or to be eccentric, and so mitral constriction instead of mitral incompetence results.

What determines this welding together of the valve segments? It would appear probable that any endocarditis occurring in a heart where the valve segments are already thickened and rigid would supply vegetations which, by growing together, union by the third intention, would provide the necessary factor in the evolution of mitral stenosis. This is the explanation which appeals most to my own mind. In cases of mitral stenosis it is fairly common to find fresh vegetations along the edge of the thickened mitral valve. These may be due to two causes; (*a*) a fresh attack of rheumatism, or (*b*) endocarditis due to strain. In many cases of mitral stenosis, however, the clinical evidence of recurrent attacks of rheumatism is not forthcoming, and we are then left with the supposition that the welding together of the valve segments is due to endocarditis set up by strain.

The chronic inflammatory process spreads from the valve segments to the chordæ tendineæ, which become thickened and welded together, thus imitating the behavior of the valve segments. The brush of delicate chordæ tendineæ becomes amalgamated into two or three thick strands, which, like all cicatricial tissue, tend to contract, and the valve is pulled down into the cavity of the ventricle so that the valve appears funnel-shaped from below, though the rigid valves surround a slit-like or button-hole mitral.

Funnel-shaped mitral.—By continuation of the process of blending and welding together of the rigid edges of the valve segments the slit or button-hole orifice may gradually become converted into a round orifice. In this way the funnel-shaped mitral can be derived from the button-hole form.

The thickening and contraction of the chordæ tendineæ depress the united segments into the ventricle, and thus complete the funnel-shaped mitral.

Although the funnel-shaped mitral may be derived from the button-hole form, it must not be supposed that this sequence is in any way inevitable and unvarying. Cases of long standing mitral stenosis may simply present the button-hole form.

On theoretical grounds it might be supposed that a button-hole and a funnel-shaped mitral would present different physical signs; that a button-hole mitral could give rise to pure obstruction, while a funnel-shaped mitral would give rise both to obstruction and, since it is held rigidly open, to regurgitation as well.

The effects of mitral stenosis.—There is a constant obstruction to the onward flow of blood through the mitral orifice ; this contrasts with mitral reflex, where the blood is intermittently driven back by the hypertrophied left ventricle on to the lungs, but in the intervals can return without any impediment into the left ventricle.

Mitral stenosis and regurgitation are often combined, but in order to simplify matters we will only consider the effects of pure stenosis. As less blood enters the ventricle, it tends to become smaller than in health, and its development is also interfered with by a blood-supply which is impaired, since the blood pressure on the coronary arteries is diminished. The apex-beat is a little nearer the sternum than in health, and is somewhat feeble. Since the left ventricle is less well filled than in health, and so loses its normal stimulus to contract, it tends to do so less frequently. In the earlier stages of mitral stenosis, therefore, the pulse may be, though it is not necessarily, slower than natural. In passing we may note that the only two diseases of the heart in which it beats more slowly than natural are mitral stenosis in the early stages, and aortic stenosis. In the later stages of mitral stenosis the pulse is rapid and very irregular—in fact, the two chief pathological conditions in which the pulse is irregular are dilatation of the left ventricle and advanced mitral stenosis. In mitral stenosis the irregularity depends on the left auricle becoming over-dilated, and, from over-distension and over-stimulation of its walls, irritable, so that it starts irregular —sometimes, indeed, abortive—contractions which spread to the ventricle.

The first effect of the constant obstruction at the mitral orifice is dilatation of the left auricle ; this shows itself clinically by upward extension of the cardiac dulness to the third or second rib. In this area there may be pulsation due either to the pulmonary artery and infundibulum of the right ventricle from which the pulmonary artery arises, or, as some think, to the forcible contraction of the auricle itself. It should be remembered that in other cases pulsation in this situation may be communicated from an unduly exposed pulmonary artery, the left lung being retracted as the result of past inflammation, usually tuberculous.

The distended auricle should, in accordance with the rule that whenever there is obstruction to the passage of blood out of any orifice of the heart the first change which occurs is hypertrophy, undergo compensatory hypertrophy of its muscular walls ; and so to a certain extent it does, but there is so little muscular tissue available in its walls that the hypertrophy is, so to speak, taken on by

the cavity next behind, viz., the right ventricle. The hypertrophy of the right ventricle constitutes the compensation in mitral stenosis, and clinically is evidenced by pulsation of the epigastrium.

The increased blood pressure in the left auricle leads to thickening of its lining endocardium ; this may be regarded either as a physiological hypertrophy, or as a pathological chronic endocarditis due to strain. It should be remembered that normally the endocardium of the left auricle is thicker than that of the right, but in mitral stenosis this is exaggerated.

The blood stagnates to a certain extent in the dilated auricle, more especially in the auricular appendix ; and partly as a result of the stagnation, partly as a result of imperfect nutrition of the lining endocardium, clotting of blood may take place during life. The appendix of the auricle is the usual site ; in exceptional cases only does a clot of any size arise elsewhere in the auricle. You have lately seen a large pedunculated clot arising from the septum of the auricles in the case of Dr. Ewart's.*

These ante-mortem clots are firmly fixed to the wall of the auricular appendix, and undergo a certain amount of organization ; the central portions are very prone to soften down, so that a cavity is formed. These thrombi have been described as "suppurating cardiac polypi." The clot may, as already implied, become pedunculated, and a round mass arises from a stalk which is attached to an endocardium of the auricular appendix. This pedunculation probably depends on the muscular contraction of the appendix moulding the soft blood-clot, and extruding it into the more roomy auricle.

The pedunculated part may get broken across, and a loose ball of fibrinous blood-clot, perhaps softened internally, or, as one of our museum specimens shows, solid throughout, remains in the cavity of the auricle. The ball clot thus formed is an exception to the rule that ante-mortem blood-clots are firmly adherent to the wall of the vessel or heart, but only an apparent exception, for, as has been shown, it was at one time firmly adherent. These ball clots may remain in the auricle without producing any untoward symptoms, since they are too large to pass through the constricted mitral orifice. In a few cases they appear to have been driven into the stenosed mitral orifice, and by their impaction there to have produced sudden death.

When smaller patches of clot become detached and pass into the ventricle, they give rise to embolism in the systemic vessels ;

**Vide* "Trans. Clin. Soc.," vol. xxx, p. 190.

when they lodge in the middle cerebral, to hemiplegia; and it is important to bear in mind embolism as a cause of hemiplegia in young girls. If the embolus lodges in the vessels at the base of the brain, which lying on the subarachnoid space are badly supported, the artery may be so damaged by the impact that an aneurysm results at the site of the embolus, just as in rare instances an aneurysm occurs at the site of a ligature. Another situation where a simple non-infective embolus may give rise to an aneurysm is the poorly supported arteries of the mesentery. In both cases the unsupported condition of the vessels is the disposing cause of the giving way of the arterial walls.

Such aneurysms may rupture and give rise to extensive hæmorrhage. I was much impressed by a case illustrating this. A girl was brought into St. Bartholomew's Hospital some years ago when I was house physician for Dr. Church, insensible and affected with hemiplegia. On examining her heart it was found that she had signs of mitral stenosis. She rapidly died, and feeling confident of the diagnosis I rashly signed the death certificate "mitral stenosis, cerebral embolism," before seeing the post-mortem examination, which showed extensive cerebral hæmorrhage from rupture of an aneurysm, which no doubt was in its turn the result of past embolism.

Embolism of the arteria centralis retinæ occasionally occurs, giving rise to loss of vision.

Embolism of the end arteries in the kidney and spleen produces an infarct, and the absorption of tissue fibrinogens derived from the necrosing cells of the infarcted area gives rise to an elevation of temperature. At the time of the embolism there may be violent pain in the splenic region, with some peritonitis, as shown by tenderness and pain on taking a deep breath, suggesting pleurisy; the spleen, too, may be found to be slightly enlarged. In the case of the kidney the signs are slight or not noticed, probably because its relations to the peritoneum are limited as compared with those of the spleen. Hæmaturia is very seldom seen. Infarcts do not, except under most exceptional conditions, occur in the liver, as there is a double blood supply to the liver, from the hepatic artery and portal vein.

When a large branch of the superior mesenteric artery is blocked, a loop of intestine may become gangrenous, and the signs of acute intestinal obstruction result; but from the free anastomosis such an accident is very rare. Still, its possibility should be borne in mind when a patient with mitral disease suddenly develops acute obstruction.

Embolism of the arteries of the limbs gives rise to sudden and acute pain, followed by loss of power; but since it usually occurs in young subjects with healthy arteries, the free collateral circulation prevents gangrene, which in old persons would be likely to result.

The constant damming up of the blood in the left auricle leads to a similar condition in the lungs, which undergo the change known as brown induration. They are darker in color than natural; constant dilatation of their capillaries gives rise to extravasation of red blood-corpuscles into the substance of the walls of the air-cells, and degenerative changes in the hæmoglobin lead to pigmentation. The lungs are moister than natural, and prone to catarrh. Bronchitis is thus a common incident in the course of such cases. The moist condition of the lungs probably accounts for the rarity of pulmonary tuberculosis in mitral disease. They are both common diseases, and would naturally coincide occasionally, but this is extremely rare. The moist condition of the lungs probably leads to the removal of any tubercle bacilli which may be inspired, before they have had time to take root and multiply.

The stagnation in the pulmonary veins necessitates a similar condition in the pulmonary artery; the increased strain due to the obstruction in front and the hard-working, hypertrophied right ventricle behind shows itself clinically by the accentuated and sometimes reduplicated second sound over the pulmonary artery. The forcible closure of the pulmonary valves can often be felt in the second left interspace as a shock. Pathologically the effect of this continued high blood-pressure or strain from within is to give rise to chronic endarteritis of the branches of the pulmonary artery. The atheroma in its turn leads to a dilated condition of the pulmonary arteries, endarteritis deformans, and rupture may occur. The blood is then poured out into the lung tissue—a pulmonary apoplexy. As a result hæmoptysis occurs, while the pleura may become inflamed and an effusion may follow. Rupture of vessels brought about as described is the most frequent cause of pulmonary apoplexy. It may be due to an embolus from the right side of the heart, but it is usually difficult to make out that the clotted blood in the artery going to the apoplexy contains any embolus; the thrombosis is usually, as shown by its age, secondary to the apoplexy. That embolism from the right side of the heart may give rise to a so-called pulmonary infarct is undoubted, but it is equally true that an embolus may occur in the pulmonary vessels without any "apoplexy" or infarction resulting in the lungs. It is generally

thought that pulmonary apoplexy is commoner in mitral stenosis than in mitral regurgitation; but in 70 cases of pulmonary apoplexy tabulated by Dr. Lee Dickinson from the post-mortem records of this hospital, only sixteen were associated with mitral stenosis, most of the rest being cases of mitral reflux. It is possible that the sudden pumping back of blood in mitral incompetence brings a sudden strain to bear on the delicate terminals of the pulmonary vessels, which is more detrimental to them than the sustained high pressure of mitral obstruction. In passing we may notice that pulmonary apoplexies occasionally depend on the dilatation of the left ventricle and the resulting mitral incompetence which occur in the course of nephritis, whether chronic or acute.

The hypertrophy of the right ventricle shows itself not so much by increase in the thickness of its muscular wall, as by an alteration in its firmness; it becomes tougher, more resistent, and denser. This hypertrophy constitutes the compensatory mechanism against obstruction to the passage of blood through the mitral orifice; the danger that may result from this compensation has already been referred to—pulmonary apoplexy. As a result of the gradually increasing obstruction at the mitral valve in front, and the hard-working, hypertrophied left ventricle behind, the thin-walled vessels in between may give way. The increased pressure inside the hypertrophied right ventricle may produce thickening of the lining endocardium, and especially of that part which by its reflection forms the tricuspid valve, so that a certain amount of chronic valvulitis is produced. The thickening of the valve segments is, however, not a very serious thing, and probably of itself does not often give rise to tricuspid regurgitation; the chronic strain may perhaps in some instances lead to the valve segments becoming united together, and so to tricuspid stenosis; but this is rare. Tricuspid stenosis is practically always associated with mitral stenosis, and is produced either as described above, when it is directly secondary to mitral stenosis, or is partly due to this and partly due to acute endocarditis of rheumatic origin.

When the mitral obstruction, which from cicatricial contraction tends to be progressive, reaches a stage at which the hypertrophied right ventricle can no longer drive the blood satisfactorily through into the left ventricle, the compensation fails and the right ventricle dilates. The same result is brought about if the resistance in the lungs is greatly increased by intercurrent bronchitis, or if the nutrition of the right ventricle is otherwise impaired. When the right ventricle dilates, the ring, partly muscular, partly fibrous, at the base

of the ventricle from which the valve segments arise, dilates with the rest of the ventricle, and the valve segments are unable to meet. Tricuspid regurgitation results, and the compensation is said to be ruptured. There are thus three stages as regards the state of the compensation ; the first where it is good or perfect, the second where it is strained and likely to fail, and the third where it has given way entirely. It is in the second and third stages that patients come with symptoms of heart disease.

Let us first trace the effects of tricuspid regurgitation. The blood will no longer be driven forcibly on into the lungs, and the left auricle will no longer be so well distended with blood ; but the blood will be partly driven back into the right auricle and venous system generally, and partly onwards into the pulmonary artery, though at a much lower tension than before. The proof of the lower tension in the pulmonary artery is the disappearance of the accentuation of the pulmonary second sound, which becomes, if anything, less marked than in health. The backward pressure has become transferred from the lungs and right side of the heart to the venous system, which becomes engorged with blood, while the arterial system becomes comparatively empty. The diminished pressure in the left auricle accounts for the disappearance of the presystolic murmur, and all that may be heard over the apex is a systolic murmur due to concomitant regurgitation, perhaps no definite murmur at all.

As a result of tricuspid regurgitation, a systolic murmur may be heard at the bottom of the sternum ; but, as a matter of fact, it often is not. The dilated right auricle and right ventricle give rise to increased dulness to the right of the sternum and epigastric pulsation.

We will now briefly trace the effects of general venous engorgement due to tricuspid regurgitation. Each time that the right side of the heart contracts, the blood is driven backwards into the venæ cavæ. The backward pulse does not for a time appear in the jugular veins. This is due to their orifices into the innominate veins being guarded by valves, which only become incompetent when the dilatation of these veins has so enlarged the circumference of the orifice of the jugular veins that the valves situated there are unable to come in contact. The pulsation in the neck which then results has a somewhat vermicular character and is double, there being two waves for each beat of the heart—one for the auricle, one for the ventricle, of which the latter is the best marked. This pulsation can be exaggerated by pressure on the liver, which probably acts by driving a larger

quantity of blood up into the head and neck. The engorgement of the veins in the head and neck accounts for the characteristic complexion of patients with advanced mitral disease, and for any disturbance of cerebral function.

The blood being driven into the inferior vena cava produces chronic engorgement of the hepatic and sublobular veins ; the liver becomes enlarged, and from the tension exerted on its capsule, tender. As a result of venous stagnation, the functions of the liver are imperfectly performed. The liver cells tend to atrophy, and undergo fatty degeneration, and there is some stagnation of bile. On section the liver presents an appearance which has been compared to the section of a nutmeg, the sublobular and the intralobular veins in the centre of the lobule standing up as prominent purple areas, which contrast with the surrounding liver substance, which is pale from fatty degeneration, and perhaps bile-stained. Sometimes, but much more rarely than one would expect, the hepatic veins are so dilated that the liver expands with each beat of the heart like an accordion. This pulsation must, of course, be distinguished from transmitted pulsation either from the heart or more rarely from an abdominal aneurysm. As the result of the partial atrophy of the liver cells, which is specially marked in the centre of the lobules, and is due partly to a deficient supply of arterial blood and partly to the constant pressure exerted by the dilated capillaries, a certain amount of fibrous substitution occurs. This may be called cardiac cirrhosis, but is not comparable either in its degree or in its effects to common cirrhosis starting from the portal vein. The venous stasis in the liver produces a similar condition throughout the portal vein, giving rise to dyspepsia, from which cardiac patients especially suffer, to imperfect absorption of food, and to irregularity of the bowels, generally constipation. The interference with the assimilation of food may induce an ill-nourished habit of body ; this is especially the case in growing children, among whom morbus cordis is a "wasting disease."

As a further result of continued portal stagnation ascitis results, and this is associated with chronic thickening of the peritoneum ; the abdominal distension compresses the lungs and further embarrasses respiration.

All the abdominal organs share in the venous engorgement ; the spleen becomes firm and hard, but is not appreciably increased in size unless there is fever. The pancreas becomes enlarged, firmer than natural, and shows a varying amount of fibrous increase, in very rare instances clinically simulating an abdominal tumor.

The kidneys of chronic venous congestion are tougher than natural, and at the post-mortem not engorged as they must be during life, but, contradictory as it seems, slightly paler than in health. Being rather badly supplied with arterial blood, the delicate epithelium covering the glomerular tufts is likely to degenerate and allow albumen to pass into the urine; a similar result often occurs in fevers and toxæmic states, and accounts for febrile albuminuria. As a result of the comparatively low arterial pressure in the kidneys, the urine is diminished in amount and high colored. As in the liver so in the kidney, chronic venous congestion necessitates an impeded and impaired arterial blood supply; on this follows a certain amount of atrophy of the active, secreting parts of the kidney, and the fibrous supporting tissue of the organ becomes more evident, and perhaps actually, as well as relatively, increased in amount. A real granular kidney is never produced, but a fair naked-eye imitation of it may result from the scars left by numerous infarcts, but you must be on the alert to distinguish these two conditions.

The backward pressure in the inferior vena cava leads to œdema of the legs, so that in the last stages of tricuspid regurgitation the patient is generally waterlogged all over the body and limbs. There is an important difference between mitral stenosis and mitral regurgitation as regards the development of œdema; it appears early in the course of regurgitation, late in stenosis.

In conclusion, we will consider briefly a few points of interest in connection with the murmurs of mitral stenosis. Time will not allow of a full discussion of the many interesting questions involved, so we will not at present go through the signs characterizing the three stages of mitral stenosis.

The apex beat, as we have seen, is rather nearer the sternum than in health, and at this point the presystolic murmur is heard, usually over a limited area; but sometimes this area spreads out very considerably. At the apex a presystolic thrill, due to the coarse eddies induced in the blood stream as it is driven from the auricle through the constricted mitral orifice into the ventricle, may usually be felt when there is a presystolic murmur; the thrill and murmur being the palpable and audible manifestations of the eddy in the blood stream. The thrill is, of course, intra-ventricular. This is of some importance in distinguishing a genuine thrill from a vibration of the chest wall which simulates it—a pseudo-thrill. When the whole hand is placed on the chest wall, vibrations conducted from a forcibly-beating heart to several intercostal spaces may produce a thrill which is really only due to the pulsation of the

chest wall being interrupted by the rigid ribs. In such a case, if the fingers be separated and placed over the intercostal spaces, the sensation of the thrill disappears, and a pseudo-thrill due to vibration of the chest wall can thus be distinguished from the finer, purring thrill produced inside the left ventricle in mitral stenosis. The presystolic murmur is extremely capricious, comes and goes within short intervals of time, and may be replaced by the mid-diastolic or early diastolic murmur.

The mid-diastolic murmur is the commoner, and is best heard at the apex, immediately after the second sound, so that it is often described as reduplication of the second sound. It can be distinguished from true reduplication of the second sound by listening at the base of the heart, where the second sounds are produced ; if there is no reduplication there, what appears to be reduplication at the apex must be something else. This mid-diastolic murmur is probably due to the suction-pump action exerted by the left ventricle producing an eddy in the blood stream as it rushes in from the auricle. The early diastolic murmur which replaces the second sound, and is of the same character as the aortic diastolic murmur, is best heard about the fourth left costal cartilage, but is often well heard at the apex. This is Hope's murmur described by the first assistant physician to this hospital. Comparatively rare though the murmur be, its causation has given rise to a good deal of discussion. It has variously been ascribed (*a*) to the same cause as the presystolic murmur, namely, the forcible contraction of the left auricle, which in this case is supposed to begin abnormally early in the diastole, producing an eddy in the blood as it runs through the constricted mitral ; (*b*) to the same cause as that giving rise to the mid-diastolic murmur, namely, the suction-pump action of the left ventricle ; and (*c*) more recently to regurgitation through the pulmonary valves—a kind of safety-valve action brought about by dilatation of the trunk of the pulmonary artery which results from backward pressure.

Though, generally speaking, the presystolic murmur means mitral stenosis, there are exceptions to this, as to most rules. The best known example of this is Flint's murmur, a presystolic murmur audible at the apex in cases of well-marked aortic regurgitation without any organic narrowing of the mitral valve ; the production of the murmur can be exlpained by supposing that the regurgitant column of blood strikes the anterior or aortic cusp of the mitral valve, bulges it in, and thus temporarily diminishes the size of the mitral orifice, through which at this time (diastole) the blood is pouring into the ventricle from the auricle, or by supposing that irregular

vibrations are set up in the mitral valve by the impact of blood regurgitating from the aorta. The presystolic murmur is also heard in some cases of dilatation of the ventricle, and especially in children with adherent pericardium. In some of these cases there is probably greater dilatation of the left ventricle than of the mitral orifice, so that a certain degree of relative stenosis is brought about.—*The Chemical Journal, Dec. 1, 1897.*

RELIEF OF TYMPANITES BY POSTURE.

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FEW complications in abdominal cases, both medical and surgical, give rise to so much distress, and, if unrelieved, so certainly produce death as extreme intestinal distention. Some years ago I was called to a case of this kind. My patient was a woman between forty and fifty years of age. I found her pulseless at the wrist. On examining the heart its action was markedly tumultuous, her breathing shallow and rapid, her face and hands were cold and covered with moisture. Hoping to improve the heart's action, I at once raised the foot of the bed some two feet. In her distress she kept constantly rolling. Finally she settled on the right side and before many minutes the obstruction was removed, the tympanites promptly disappeared, and her general condition became practically normal as far as this difficulty was concerned. I was greatly surprised at the sudden improvement so promptly developing after the elevation of the foot of the bed. Having some time before this noticed, in treating a case of stricture of the sigmoid portion of the colon, that the dilators were introduced with increased ease when the patient was placed in the Sims's position, the hips being well elevated, I decided that the relief resulted from some change brought about in the folds of the rectum. I have since continued to employ position as a means of relief in all cases of tympanites, both medical and surgical, before resorting to more heroic treatment. It was not, however, until last winter, when on a visit to Dr. Howard A. Kelly, of Baltimore, that I fully appreciated the amount of alteration which takes place in the arrangement of the rectal folds when one is placed in the knee-chest position. One day, while watching Dr. Kelly make a rectal examination, I was able to see Houston's folds in their usual position, but the patient being kept in the knee-chest position, gradually the rectum straightened out, the additional length being contributed to by these folds, which absolutely disap-

peared into the bowel wall. Here was a complete and satisfactory explanation of the relief secured in the great majority of cases of tympanites in which posture had been employed as a means of relief. Sometimes it is necessary to keep the hips in this elevated position for ten or fifteen minutes before the contents of the abdominal cavity gravitate sufficiently from the pelvis to enable the upper portion of the rectum to pass out of the pelvis towards the abdominal cavity. Until this occurs, of course, no relief is secured. In cases of marked tympanites the distention is practically confined to the large intestine, and it would appear that the obstruction to the escape of flatus is due to the downward pressure of the descending colon and sigmoid flexure upon the upper portion of the rectum, forcing the folds of Houston one upon the other, and bringing about, in this way, what is for the time in effect an impermeable stricture. If an attempt is made to pass this obstruction from below the soft rubber tube will coil upon itself, and fill that portion of the bowel just below the folds. The most rational method of relieving this obstruction and liberating the imprisoned gas would seem to be the inversion, or partial inversion, of the patient, and removal through the aid of gravitation of the pressure from above, which has converted the mucous folds referred to into an absolute obstruction.

The value of this expedient, as a remedial measure, in tympanites which so frequently follows intestinal surgery, has recently been emphasized by an experience with a case of bile-duct obstruction, in which anastomosis had been established between the gall-bladder and the duodenum. Some thirty hours after the operation the medical man in charge of the case, and with whom I had been associated at the time of the operation, telephoned me that his case was in extreme danger. She had developed, to a marked degree, the usual symptom of abdominal distention, and her attendant, after adopting all the measures usually employed in this condition, feared immediate heart-failure. After hearing the treatment he had adopted, I advised him to place his patient in the knee-chest position, this notwithstanding the fact that it was only thirty hours since the operation was done, and that the drainage-tubes were still in the wound. He adopted the suggestion, and in less than five minutes his patient had secured absolute relief.

If my experience be confirmed in the practice of others, it would seem a pity that none of the many works treating upon the subject of abdominal surgery make mention of this as a possible means of affording relief in this condition. And its application is by no means confined to surgery, for in typhoid fever and the other forms

of intestinal disturbance, which so frequently give rise to this condition, the remedy promises to be equally safe and satisfactory.

There is, however, one notable exception, and that is in severe cases of general peritonitis. Here it is questionable whether one is justified in resorting to the position. In the cases in which I have employed it, no good has resulted from it. There was, however, no evidence of its having inflicted any injury.

While the knee-chest position may answer best in cases of extreme distention, the placing of the patient upon the side, with elevation of the foot of the bed, will commonly secure relief in cases of moderate distention.

Among other remedies spoken of as being worthy of a trial in this condition we find enemata of turpentine, creosote, and assafœtida. The same remedies are frequently resorted to and administered by the mouth, as are also alcohol, charcoal, ginger, capsicum, and other carminatives. The frequency of our disappointment in connection with the administration of drugs is readily explained. During extreme distention the stomach and bowels have not only their power to contract, but also that to absorb, absolutely paralyzed. If relief be not too long delayed, the removal of the distention is followed by a marked increase in peristalsis. If purgatives have been freely administered, the distention being relieved, peristalsis may be excessive and a severe diarrhœa caused—a form of cumulative action.

A form of treatment which at one time had many advocates, but which now has become practically obsolete, or, if employed at all, is simply used to secure euthanasia, is puncture. The one indication for puncture in excessive tympanites would appear to be malignant obstruction where abdominal section was contra-indicated or declined. In excessive distention it is usual to find the distention practically confined to the colon, sometimes in the stomach, rarely in the small intestine. When in the latter position, puncture gives but little relief unless applied at so many points as to render the development of peritonitis probable; if situated in the stomach, relief is secured with greater safety and equal promptness by means of a stomach-tube; if in the colon, the knee-chest position, with, if necessary, the insertion of a gum-elastic tube, offers at least as good a prospect of relief as puncture without the risk attending that operation. The danger in puncture will practically be from one of two causes, hæmorrhage or fæcal extravasation; hæmorrhage when the triangular or spear-pointed trocar is used, and extravasation, from the production of a wound in the intestine larger than that required

for the removal of the gas. Just as a pin-prick in a piece of rubber tissue stretched over a convex surface rapidly becomes a large rent, so, often, puncture in extreme intestinal distention has resulted in a rent of the intestinal wall, altogether out of proportion to the size of the instrument with which the wound was produced. Examination of the intestine post-mortem gives very little idea of the size of the wound in the intestine while distention existed. This, doubtless, will explain many of the cases in which extravasation, peritonitis, and death occurred, and where, after death, considerable difficulty was experienced in discovering the point at which puncture was made. Of course, the better the condition of the bowel, the more prompt the contraction, the shorter the time allowed for extravasation of the intestinal contents. Cases of extreme and long-continued distention without the evidence of peritonitis with plastic exudation would seem to be the least favorable for this form of treatment, which under the very best conditions must always remain somewhat hazardous.—*Annals of Surgery.*

Progress of Medicine.

MEDICINE

IN CHARGE OF

J. E. GRAHAM, M.D., M.R.C.P. Lond.,

Professor of Medicine and Clinical Medicine, University of Toronto; Physician to the Toronto General Hospital, and St. Michael's Hospital;

AND

THOMAS F. McMAHON, M.D.,

Professor of Medicine, Women's Medical College; Physician, St. Michael's Hospital; Physician to Toronto General Hospital;

ASSISTED BY

JAMES G. CAVEN, M.B.

The DeBacker Treatment of Tuberculosis and Cancer.

If the question were asked of a physician, "In what way would you wish to immortalize yourself?" the chances are that he would answer "by discovering a method of curing tuberculosis," or "by curing cancer." The claims of Dr. deBacker, of Paris, that he has discovered a method of curing these dread diseases which not only promises, but has actually yielded remarkable results, must be of interest to physicians the world over.

The method, according to a description by Horace Manders, of London, in the *British Medical Journal* of Sept. 25, is founded upon the discovery that yeast cells possess under certain conditions the same phagocytic powers as blood leucocytes.

In some wine which had gone wrong it was noticed that certain of the cells of the ferment (saccharomyces) contained within them the bacillus aceti; the bacteriæ so englobed were killed and digested by the nuclein within the cell. Having in view Metchnikoff's theory of phagocytosis deBacker surmised that these cells might prove a splendid aid to leucocytes if they could be safely injected into the blood. After many failures due to the use of impure yeasts, he finally prepared a pure culture of saccharomyces cerevisiæ which could be injected into a guinea pig without bad results. His next step was to inject this pure culture with a quantity of sterilized fer-

mentable matter to see if the yeast cells would multiply and carry on the function of fermentation within the system of the animal. He thus was able to prove that alcohol was produced within the body of the animal and given off with its breath and perspiration. The animal was none the worse of the experiment. An animal previously inoculated with diphtheria was then injected with the mixture of yeast cells and fermentable matter (called for convenience backerine),and it made an astonishing recovery. Encouraging results having also followed injections of backerine into guinea pigs rendered artificially tuberculous, phthisical patients were next treated in the same way. DeBacker claims that in the early stages,the disease has been nearly always arrested, whilst even in the stage of softening seventy-five per cent. have either been cured or shown permanent improvement. He does not think these ferments are specifics for tuberculosis, but is of the opinion that the cells come to the aid of the natural phagocytes—the leucocytes—and help them to destroy the invading bacteriæ, and, to quote deBacker, "substitute a healthy,natural fermentation for one that is pathological." In making wine large quantities of the wine wort may turn sour owing to the presence of bacilli (acetic, butyric, or lactic); if now a certain quantity of pure ferment is added the acetic fermentation is arrested and the wort brought back to its normal fermentation.

The blood is compared to this wort and is conceived to be disturbed in its functions by Koch's bacillus, as the wine wort is disturbed by the bacillus aceti, and to be capable of being restored to its normal condition by a quantity of pure ferments.

The results in cancer have been, he claims, even more astonishing. "Out of a total of sixty tumors we have seen eighteen cures lasting over some years. Of these, four had been operated upon with rapid recurrence. Twelve cases of very rapid growth also have been very markedly retarded."

Whilst testing the innocuity of backerine upon guinea pigs by giving them repeated injections a curious result was noted. Although they got fat they were generally sterile, and when impregnation did occur, the fœtus did not develop. He suggests that the sterility may be due to "the lessened glycogenous material in the uterus." Now cancer contains a large proportion of glycogen and is prone to occur in localities in which glycogen is normally present in large quantities (breast, liver, uterus, etc.). If these ferments can lessen the natural glycogen of the body we can conceive of their checking the pathological increase of the same substance, and thus tending to starve the cancer cells which grow luxuriantly in its

presence. The rapidity of growth in a tumor is said by M. Brawlt to be in direct proportion to the amount of glycogen contained in it, probably because the cells are enclosed in a medium too rich in this substance in which they proliferate without order, symmetry, or selection.

In this age of fads we must be cautious in accepting statements for facts, but the results aimed at are of such importance that we shall await further experiments with much interest.

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Associate Professor of Surgery in the University of Toronto; Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

HERBERT A. BRUCE, M.D. Tor., F.R.C.S. Eng.,

Associate Professor of Surgery in the University of Toronto.

TYMPANITES.

An article upon this subject from Dr. Miles F. Porter appears in a recent issue of the *Medical News*. He draws attention to the danger of distension and the probable fatal termination by heart failure. He speaks of the causes as being either obstruction to the passage of gas or the undue formation of gas. The obstruction may be due to paresis or physical causes, as bands, etc. He quotes Sweetnam, and gives him credit for priority in recommending postural treatment of tympany.

He arrives at the following conclusions :

1. That intra-intestinal tympany in and of itself often kills patients suffering from abdominal and pelvic disease, and that it may do so in cases which are neither pelvic nor abdominal.

2. That tympany occurring in the course of any serious illness should be considered a symptom of ill omen, and that measures for its relief should promptly be instituted.

3. Failing to obtain relief by cathartics, posture, enemata, and the use of the rectal tube, celiotomy and incision of the gut should be promptly done.

4. In cases of general peritonitis and bowel obstruction, no trial should be made of other methods, but celiotomy and incision of the gut should be performed as soon as the diagnosis is made.

5. Puncture of the bowel should be carried out only in cases in which the patient is *in extremis*, and then only in cases such as typhoid fever without perforation, pneumonia, etc., which present no other cause for celiotomy than the tympany itself.

The Treatment of Cut-Throat Wounds by Immediate Suturing of all the Divided Structures.

This is strongly advocated by Mr. Henry Morris, F.R.C.S., Senior Surgeon to the Middlesex Hospital, in a clinical lecture delivered in May, 1897. By the liberal use of buried and superficial aseptic sutures immediate union is secured and convalescence is shortened to one quarter, or even less, of the time required by leaving the wound open to heal by granulation.

It enables the patient to talk and swallow naturally within a few hours after the injury, instead of being fed for days, or even for a week or two, by means of the œsophageal tube; it does away with the offensive discharge of food, saliva, and tracheal secretion through the wound; it permits the dressing being retained over the wound unchanged for several days, and it is not followed by any of the old risks of incurvation of the edges, of stricture, or of fistula. There are no grounds for the old objections to immediate suturing, for primary union is as easy to obtain in wounds of the trachea and larynx as elsewhere. There is no more difficulty here than elsewhere in controlling hæmorrhage and preventing suppuration; and if this is so, wherein is the danger of blood or pus getting into the air passage?

Of course proper care must be exercised in the application of sutures, and strict attention must be given to the general state of the wound before inserting them. The patient should be anæsthetized, and all even small bleeding parts secured; scrupulous cleanliness of the parts must be obtained by the usual aseptic and antiseptic means. Then the cut edges of the wind-pipe should be adjusted by fine silk sutures, which should not penetrate the mucous membrane. The sutures should be applied close enough to one another to prevent any portion of the edges of the wounded air passage from flapping or swaying backwards and forwards with the ingress and egress of air. The sutures should pass through or around the rings of cartilage if necessary. Then the divided edges of the fascia covering the trachea or larynx should be united with separate sutures. This is a very important step in the procedure, and great care should be given to it, because the close union of this fascia affords additional security to the closure of the air tube, and helps in preventing any escape of air between the sutures uniting the edges of the wind-pipe. Next, in the same way, the infra-hyoid muscles, the deep fascia overlying these muscles, and the skin respectively, must be properly joined. A small drainage-tube may

be inserted between the edges of the skin on each side near the outer extremities of the superficial wound, but not near the middle line of the trachea. Finally, it is very necessary to keep the head sufficiently flexed, and the head and neck very fixed, during the period requisite for firm healing of the wound. In applying the sutures bear in mind the fact, that the muscles, fasciæ and air tube have a stronger tendency to retract than the skin, so that these structures must be sought for and drawn up from below and behind the cut edge of the skin. Great care should be exercised in accurately closing the air tube, and if not sure that at any part it has been made air tight, then at this part special care should be taken to bridge it over with the deep layer of fascia. Surgical emphysema may occur from insufficient and improper suturing, but this is no more an argument against the use of sutures in cut-throat wounds than is extravasation of fæces into the peritoneal cavity from a similar cause an argument against the complete and water-tight suturing of the two ends of recently divided intestine. Mr. Morris doubts very much if a tracheotomy tube is ever really needed. If a tube is used it should be introduced through a newly made vertical incision, and not through the suicidal wound in the air passage.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto; Surgeon to St. Michael's Hospital;

ASSISTED BY

J. W. SMUCK, M.D.

Report of Provincial Board of Health for October.

Total number of municipalities in the province, 745; total making returns for October, 509, or 68%.

The total deaths returned from the several contagious diseases for a population of 1,352,886 were 216, or at the following rate per 1,000 for municipalities which made returns, calculated on a per annum basis. (Total population of the province, 2,233,117.)

	Population and % of whole.	No. of deaths from and rate per 1,000 per annum.						
		Scarlet Fever.	Diphtheria.	Measles.	Whooping-Cough.	Typhoid Fever.	Tubercu-losis.	Total.
Cities reporting.	388,116 (77%)	0	7 (0.2)	0	2 (0.06)	13 (0.4)	60 (1.8)	82
Towns and villages reporting.	294,648 (67%)	0	11 (0.4)	1 (0.04)	1 (0.04)	10 (0.4)	22 (0.9)	45
Townships reporting.....	670.122 (68%)	0	26 (0.4)	0	5 (0.09)	22 (0.4)	36 (0.6)	89
	1,352.886 (66%)	0	44 (0.39)	1 (0.009)	8 (0.07)	45 (0.39)	113 (1.00)	216

REPORT OF PROVINCIAL BOARD OF HEALTH FOR NOVEMBER.

Total population of the province 2,233,397.

Total population reporting 1,380,956, or 62 per cent.

Total number of municipalities in the province, 745; number making returns for November, 563, or 75 per cent.

Table showing total deaths returned from the several contagious diseases for a population of 1,380,956 were 221, or at the following rate per 1,000 for municipalities which made returns, calculated on a per annum basis.

	Population and % of whole.	No. of deaths from and rate per 1,000 per annum.						
		Scarlet Fever.	Diphtheria.	Measles.	Whooping Cough.	Typhoid Fever.	Tuberculosis.	Total.
Cities reporting.	408,178 (85%)	2 (0.06)	14 (0.4)	0	2 (0.06)	16 (0.4)	51 (1.5)	85
Towns and villages reporting.	238,564 (59%)	0	11 (0.45)	2 (0.08)	5 (0.2)	9 (0.37)	29 (1.2)	56
Townships reporting.....	683,214 (83%)	3 (0.05)	18 (0.3)	1 (0.02)	2 (0.03)	9 (0.16)	47 (0.8)	80
	1,380,956 (75%)	5 (0.04)	43 (0.4)	3 (0.02)	9 (0.08)	34 (0.3)	127 (1.1)	221

Editorials.

NURSING-AT-HOME MISSION.

RECENT discussions on district nursing have helped to give prominence to the fact that we have in our midst in Toronto a modest charitable institution which is doing a vast amount of good in a very economical way. "Katherine Leslie" published a very interesting article in the Toronto *World*, January 7, which gave a good description of the work that is being done by the nurses of the "Nursing-at-Home Mission."

The object of the mission is to help the sick poor in their homes when they cannot be sent to any of the hospitals or other charitable institutions in the city. The nurses always act under the directions of regular medical practitioners, and are particularly careful not to interfere in any way with ordinary hospital work. They visit a large number of patients afflicted with chronic diseases, such as cancer, etc., and apply the proper dressings, and look after the proper administration of the remedies prescribed by the physicians.

We quote as follows from Katherine Leslie's article: "One of the greatest evils against which doctors have to contend is the gross ignorance of the care of the sick which prevails among the poor and illiterate, and here these nurses, who work for sweet charity's sake, are of great assistance; they show those to whose homes they go how to keep the patients clean, how to make poultices, to make nourishing food. As a matter of fact, these nurses practically do the work which the Victorian Order proposes to do. They carry with them sheets, pillow cases, towels, night gowns; supply baby clothes, bed clothing, and the like. So great has been the help and assistance of the mission work to the doctors, that at their urgent request the mission has entered on a new plan of work for the benefit of those who are not able to engage nurses at the quite properly high fee which trained nurses charge. There are those whose means are very limited, but who, in case of sickness, can afford to pay from $2 to $5 per week for a nurse to look after the patient in the house. This, of course, is quite distinct from the nursing of the destitute

poor, who will be gladly nursed and cared for without charge the same as usual."

We have before referred to the admirable work that has been done by this noble charity, and are very glad to find that the more we learn with reference to details in connection with the acts of its nurses the better we like them. We can assure the charitably-disposed that they can give to this home with every confidence that their funds will be well placed. One of the best features of the mission is that it has an investigating committee which sees that no unworthy people get any of its benefits. This committee intends also to guard against pauperizing people by refusing to nurse for small fees people who are able to pay for trained nurses.

THE AMERICAN SOCIETY OF SUPERINTENDENTS OF TRAINING SCHOOLS FOR NURSES.

THE fifth annual convention of this society will be held in Toronto, February 9 and 10, 1898, under the presidency of Miss M. A. Snively, of the Toronto General Hospital. The first session will begin at 10 a.m., Wednesday, February 9, when it is hoped a short opening address will be delivered by the Honorable G. W. Ross, Minister of Education.

Papers will be read on the following subjects :

(1) How to Obtain Greater Uniformity in Ward Work.

(2) Practical Diet Kitchens as part of a Uniform Curriculum.

(3) Hospital Diet from the Standpoint of the Hospital Superintendent.

(4) Hospital Laundries.

(5) How far Training Schools are Responsible for Lack of Ethics among Nurses.

(6) The Superintendent of Nurses.

After the close of the convention members of the association will spend some time in visiting the various city hospitals and other places of interest in Toronto.

Toronto feels honored in being chosen as the city in which this association will hold one of its regular annual meetings.

The society was organized in Chicago at the World's Fair in 1893. The following year the convention met in New York, then in Boston, then in Philadelphia, and last year in Baltimore. It is expected that representatives will be present from all the large American schools—about eighty delegates in all. The completed programme will appear later.

MEDICAL HEROES IN WAR.

MEDICAL officers in British wars have very frequently distinguished themselves in various ways, and especially in the matter of bravery. There is nothing surprising about this when we consider that one of the main characteristics in our physicians is courage in the face of the worst and most virulent diseases. Our average physician is not perfect in all respects; but, when danger threatens in the shape of serious epidemics, he seldom shows the "white feather." The London *World* contains the following paragraph: "Letters from the Indian frontier speak in the highest terms of the services rendered by the officers of the Army Medical Staff. To such an extent, in fact, have many of them distinguished themselves that general officers in command have brought their names specially to notice, and it is more than likely that three, if not four, will receive the Victoria Cross for acts of heroism which come well within the terms of the warrant governing that honored distinction."

The *British Medical Journal*, in referring to this paragraph, says: "Not the medical profession alone, but the army of which they are so essential a part and the nation which they serve so faithfully, have reason to be proud of the officers of the Army Medical Staff. In proportion to their numbers they have among them, we believe, more holders of that coveted distinction, the Victoria Cross, than any other branch of the service—a circumstance which makes the persistent discourtesy of certain officers of high rank in treating them as 'not soldiers' but 'camp followers' all the more remarkable. To insist on the fact that a class of men who seem to have greater opportunities than any other of winning a decoration which is awarded specifically 'for valor' are 'non-combatants,' appears to show that the military mind is somewhat wanting in a sense of humor, if not of fairness."

We in Canada can scarcely understand why the profession of Great Britain in their connection with army service should be treated with such scant courtesy as to be placed on a lower level than officers in other departments. To say that officers of the Army Medical Staff should be considered simply as "camp followers" is so decidedly, and so needlessly offensive, that we could scarcely conceive it possible if abundant proof of the statement were not supplied. The leading British Medical, and some lay, journals have protested very vigorously, during recent years, against the gross injustice done to military medical officers, and we sincerely hope that better counsels will prevail as to their proper treatment in the near future.

Meetings of Medical Societies.

TORONTO MEDICAL SOCIETY.

A REGULAR meeting was held December 2, 1897.

Dr. C. R. Dickson was elected a member of the society.

PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS.

Dr. B. E. McKenzie presented a man, aged 26, suffering from this condition. Patient's grandmother suffered similarly, and he had one brother who, during his life of six years, was never able to walk. Patient himself has suffered from birth, his condition gradually getting worse, although at times it seemed to be stationary. The calf muscles are markedly enlarged and hard; the gluteal muscles less so; while those of the thigh are wasted. The infraspinatus is hypertrophied, the lower portion of the great pectoral atrophied. The muscles are much weakened. The patient rises from the prone position in the pathognomic manner. There are no disturbances of sensation. The knee-jerk is absent.

Dr. MacMahon agreed with the diagnosis.

Dr. McKenzie proposes to do what Gowers recommends in that case—to advise the constant use of systematic exercise. Drugs were of no service.

Dr. G. H. Carveth described a case in which the disease seemed to be stayed; for the patient was about forty-eight years of age. He was unable to say what treatment had been followed.

ANÆSTHESIA.

Dr. J. F. W. Ross made some remarks on anæsthesia. Regarding the choice of anæsthetics, the speaker said he had changed his opinion several times; at one time he favored chloroform, at another ether. He referred to an old book on the subject in which the arguments pro and con had been presented. Much of this appeared foolish to us now, but some of the ideas presented were dominant now-a-days. The doctor's preference in all good subjects

is for chloroform. He understood now from experience the force of Tait's statement, that deaths from chloroform call for a coroner's inquest; those from ether do not. Deaths from chloroform occurred on the table, while those from ether took place some time after. He referred to three cases he had, where death had occurred subsequent to the administration of ether from acute nephritis. The clinical features of these cases were described. Regarding the nauseating effects of the two remedies, he had found one about as bad as the other, nothwithstanding the use of vinegar, nitro-glycerine, etc., to prevent it.

Dr. McKeown said he had had about 540 cases in which he had produced anæsthesia. In most of these he had given chloroform, which was his choice, although he had only given ether some 26 times. He described one fatal case from chloroform. For stimulating respiration he liked traction on the tongue. He got much information from the condition of the pupil.

Dr. J. N. E. Brown said he favored ether, which he had recently been giving in preference to chloroform in most cases From having seen two deaths under careful anæsthetists and having heard directly of a number of others, and from having seen many close calls he believed that chloroform was very dangerous as given in the ordinary way. His practice was to give by the drop method on an inhaler. He thought pouring it on in quantity was fraught with danger. With ether he felt much safer and had not seen any bad effects from its use. He had had one case recently in which the patient had choked up with mucous, although atropine had been given, when he was obliged to change to chloroform. He strongly recommended those who had not used ether to give it a trial. He referred to the experiments of Leonard Hill and Waller, which went to show the very much less toxic effect of ether than chloroform.

Dr Rudolph called attention to Lawrie's criticism of Waller's paper, showing that although the vapor of chloroform was somes nine times as strong as that of ether, yet it was to be remembered that chloroform was used only in drachms, while ether was used in ounces. Leonard's experiments went to prove that the primary effect of chloroform was on the vaso-motor centre, producing a fall of blood pressure, the secondary effect of which was the stoppage of the heart, and respiratory failure. It was noted that by putting a bandage tightly around the abdomen there was an immediate rise of blood pressure, and the chloroform then could be increased greatly in quantity without serious result.

Dr. Webster reported having had a case of nephritis following chloroform administration. He gave the drug recently for a dentist, in which he found it almost impossible to get the patient under, as the respiration would stop.

Dr. William Oldright thought medical men should be careful how they made pronouncements to the laity as to which drug should be used. He had seen chloroform given many times by Dr. Roseberg without seeing any fatal result, whose custom was to use the gulletine method, commencing with thirty drops a minute, increasing to sixty. Dr. Oldright spoke of the necessity of pure air. The patient should not be allowed to inhale air contaminated with organic matter or Co_2. One objection he had to the use of ether was that with the Clover inhaler the patient was re-breathing his own exhalations. He called attention to a case he had recently where the anæsthetist had commenced with ether, but was obliged to change to chloroform on account of the bronchial tubes filling up with mucous. He deprecated the practice of whispering or talking while the patient was going under. The anæsthetist should be left severely alone and not be spoken to.

Dr. G. H. Carveth, who had given anæsthetics many times, said he had four suggestions to offer: (1) Consult the wishes of the patient as to the anæsthetic to be used. (2) Disinfect the patient's mouth and the apparatus used. (3) Have a fresh full bottle of the anæsthetic for each case. (4) In giving an anæsthetic, if the heart stops, stand the patient on his feet for a moment, then flat, and commence artificial respiration.

Dr. F. N. G. Starr said he was glad that while the speakers had recommended that the eye should be watched, they had not referred to that objectionable practice of scratching the cornea. He believed we should use the most recent and most scientific method of administering anæsthetics. He had seen chloroform given recently in London by means of an apparatus which allowed the patient to breathe the full amount of air customary, and which had a rubber bulb attachment by which a certain measured quantity of chloroform could be given. Full anæsthesia could be induced in from 10 to 20 minutes. Besides there was a complete absence of any unpleasant symptoms.

Dr. Ross closed the discussion.

The Society then adjourned.

TORONTO CLINICAL SOCIETY.

THE forty-first meeting of the society was held December 8, 1897. Dr. A. A. Macdonald occupied the chair.

Fellows present: McDonagh, Peters, Parsons, Boyd, Garratt, Temple, Ryerson, Primrose, Wright, Macdonald, Fenton, Murray, Bingham, King, Oldright, Grasett, Hamilton, Cameron, Fotheringham, Brown. Dr. Graham Chambers was elected a member of the society.

Dr. Fotheringham reported a case of hysteria in a girl aged 10. Three years before he saw the patient she had an attack of diphtheria, which might have given rise (in the opinion of those who saw her) to the paraplegic symptoms which appeared on November 31, 1895, disabling the child from feeding herself for ten months. One eye was closed for three months, and the movement of the other was impaired. Some weeks after there were twitchings of the arms and legs, but not spastic. For a time there were rhythmic movements of the head which were carried on in a rotatory fashion against the fists. The paralysis disappeared during sleep. There was no tendency to bed sores; and there was no marked wasting. At first there was some headache and some insomnia. The patient was hyperæsthetic in the presence of the mother; less so when the doctor was in. There were two sensitive spots over the two upper lumbar vertebræ. Under purely suggestive treatment there was a complete cure. The doctor then discussed the differential diagnosis. The diagnosis of hysteria depended upon the following facts: The interval between the diphtheria and the onset of the paralysis; the distribution of the paralysis and its disappearance during sleep; there was no active atrophy; the absence of bed sores; the increased knee jerk; the position of the legs—that of simple helplessness; the rythmic spasms; the twitchings; the hyperæsthesia, more marked in the mother's presence; and the hysterical stigmata.

Dr. Bingham referred to a case in which he had operated for empyæma. Although complete recovery took place the child would not allow its mother to touch the affected side.

Dr. Wm. Oldright said that it was stated that there was an absence of the faucial reflex in these cases.

Dr. Fotheringham said that he did not think that this was so. In certain cases the fauces might be one of the anæsthetic areas.

Dr. Primrose presented a child aged 7, who had come to the children's hospital with a psoas abscess. The treatment consisted

of opening the abscess, curreting with the finger-nail, injecting a 10 per cent. solution of iodoform and glycerine, stitchings and sealing up with collodion. Healing took place by first intention.

Dr. Bingham presented a child, upon whom he had done an œsophagotomy, for a button at one point had begun to ulcerate through, which made him pleased he had not persisted with the forceps in trying to extricate it prior to operating. The case was doing well.

Dr. Parsons related having assisted at removing a set of false teeth from the œsophagus. The wound suppurated. It was a difficult matter to keep such wounds from being contaminated.

Dr. E. E. King reported having had two cases of foreign body in the œsophagus—in one case it was a cent, in the other a piece of oyster shell. He was able to locate the cent with the X rays. He was able to remove them by the probang.

Dr. Garratt reported a case he had seen with Dr. Harris. A cent had lodged in the œsophagus, which they were able to locate with the X rays. They introduced a bougie and shoved it into the stomach.

Dr. McDonagh reported a case where a child had swallowed a small tin whistle, which became lodged in the œsophagus. He was able to reach it with an ivory-pointed bulb, and removed it with a pair of forceps.

Dr. A. Primrose read a paper on "The Physics of Surgical Dressings." This was the review of a paper by a Russian medical man who holds that the success of the treatment of wounds by the Listerian method depends not so much upon the antiseptic qualities of the dressings as the allowance for drainage and evaporation from the wound, in the stream of which the germs would be carried.

Dr. Cameron, Dr. Oldright and Dr. Parsons took part in the discussion.

PATHOLOGICAL SOCIETY.

A MEETING of the Society was held on Dec. 29th, 1897, Dr. H. B. Anderson in the chair.

Dr. Adami, Professor of Pathology, McGill University, Montreal, was the guest of the evening.

In addition to the members of the Society a large number of invited guests were present, about 100 in all.

Moved by Dr. Wishart, seconded by Dr. Reeve, that the minutes of the previous meeting be taken as read and adopted Carried.

Dr. Wm. Oldright exhibited a patient with syphilitic enlargement of the tibia in a man of seventy years.

Dr. Parsons read a paper on "Suppurative Cholangitis," and presented a specimen.

The chairman then introduced the guest of the evening, Dr. Adami, who read a paper on

THE OMENTUM AND ITS RELATION TO ABDOMINAL INJURY.

The historical interest of the omentum, he said, dated back to the days of Hippocrates, and some quaint examples were given to prove its function as understood at that time, such as the gladiator whose omentum protruded in part through an abdominal wound, and sloughed away. The sensations of chilliness in the abdomen experienced later by the man were taken to explain the function of the organ as an apron, keeping the intestines warm.

Until quite recently little or no interest has been taken in the omentum and its function, but of late the positions in which it has been found, and its adhesion over various lesions of the peritoneum and abdominal viscera, have been such as to suggest a compensatory influence in such conditions. The speaker gave a detailed account of the findings in some 150 autopsies made by him, referring to the rolling up of the membrane, and its constant measurements being rarely reduced, but sometimes increased.

Adhesions over inflammatory area had been frequently noted, as over perforating gastric ulcer, the string of an amputated uterus and inflamed gall bladder, and in one remarkable instance of pus formation at the origin of the mesentery, where the omentum had dipped down between the intestines and become firmly attached to the peritoneum overlying the pocket of pus.

It is impossible at present to speak decidedly as to the meaning of these phenomena, as there are so many cases of a similar nature showing no such action on the part of the omentum. They are, however, very suggestive.

Dr. Adami thanked the Society very warmly for the invitation to present this paper, and for the reception he had received.

[We regret that the paper cannot be published in full, but hope to publish a full report subsequently.]

Dr. Reeve moved that a vote of thanks be tendered Dr. Adami for the valuable and instructive paper presented to the Society. Dr. Adami is recognized by us all as the valued professor of Pathology of one of our greatest and most progressive teaching bodies. To-night we do not greet him so much as professor of a teaching

body, but as Dr. Adami, a medical man, who has won for himself the highest distinctions and a most desirable position in the profession. We know that among his many works is that on inflammation, recognized as one of the most important extant. Dr. Fotheringham seconded the motion. Not only had a valuable paper been enjoyed by the Society, but Dr. Adami's presence among us was an evidence of good-fellowship and freemasonry existing between the medical faculties of the east and west. Unanimously carried.

The vote of thanks was presented by the president to Dr. Adami.

Dr. A. A. Macdonald said he had been greatly interested by the paper. He had come as a listener, and not to discuss it. There were, however, one or two points that occurred to him. He had had more experience in opening the abdomen in living than in dead subjects, and in his experience the malposition and tucking up of the omentum is seldom seen in abdominal work. The omentum has frequently been used in stitching over sutured portions of intestines or other organs for its plastic and patching effect.

Dr. Grasett: There is a great deal of difficulty in obtaining full discussion on a subject such as this, and of which so little is known. There are some points about it that we know, and it is useless to repeat them, and any others new to us we must think over before we can intelligently discuss them. I should like to ask if the omentum be found to exert any influence in preventing adhesions between the intestines and laparotomy wounds.

Dr. Anderson referred to a paper by Durham, and some points brought out in it. He asked if there be any relation between the form of disease and the tucking up of omentum; also as to the power of the omentum to take up bacteria in peritoneal infections.

In reply, Dr. Adami thanked the Society for their vote of thanks, also for their cordial invitation. He had endeavored to give them a subject for discussion worthy of the Society.

In answer to Dr. Grasett's question, he thought the omentum may be of use in preventing adhesions between intestines and abdominal wounds by itself adhering, by its outer layer, to the wall. It is, however, impossible to say anything certain.

To Dr. Macdonald: Abdominal surgeons have already made use of the patching and plastic use of the omentum in some cases; but its utility is applicable only in certain situations, for the strangulating effect of omental adhesions under some conditions must not

be lost sight of. Habershone has brought out this point, and the possible relation between such adhesions and abdominal pain.

To Dr. Anderson: Bacteria, as well as small particles of other substances, may be taken up by means of the stomata, of which the organ has a large number. It has an undoubted absorbing action, and may also have something to do with the exudation of fluid by reason of its great vascularity, which is quite out of proportion to the usefulness of the organ as far as is known. Absorption may take place by the vessels as well as by the lymphatics.

Dr. Hamilton read a paper on "Notes of a Case of Carcinoma of the Stomach with Multiple Subcutaneous Metastasis." (See page 10.)

Dr. Graham: The case was interesting to me—I saw the case only once. It looked to me much like sarcoma, but the nodules were slower in their growth, and smaller than might have been expected in sarcoma. The question of sarcoma in the posterior abdominal region, with secondary growth in the stomach and elsewhere, was discussed. Such subcutaneous nodules are commonly found in the abdominal wall, but rarely in the limbs.

Dr. Fotheringham: The case is interesting by reason of the metastases.

In Thomas' recent work three different ways of distribution are spoken of: by the lymph channels, by the nerve sheaths, and by the blood stream. As an instance of the second, he quotes a case of epithelioma of the lip, the metastases travelling by means of the ductal canal. In the case of infection by the blood stream the organ must be very vascular as shown in cases of cancer of the penis or infection from the stomach by the portal vein. The cancer germ, whatever it may be, is probably small enough to pass through the capillaries, but mature cells are evidently too large to do so. He asked if the arrangement of the nodules in the case presented was such as to suggest any particular means of distribution, as by blood vessels or nerves.

Dr. Pepler asked if there were any nodules in the omentum, or sign of infection in that way.

Dr. Hamilton, replying, said: The organs sent him were the stomach and a small portion of the liver. He could not speak as to metastases in liver, lungs, or omentum.

Dr. Graham said there was no arrangement of the nodules to suggest any particular method of metastasis.

Dr. Reeve showed specimens of glaucomatous eyes by means of the projection microscope. The preparations demonstrated very clearly the fitting of the disc due to the increased intraocular tension.

The hour being late, it was moved and seconded that the remaining papers be postponed.

The meeting then adjourned and refreshments were served.

LONDON MEDICAL ASSOCIATION.

The regular monthly meeting of the London Medical Association was held in the Medical College on the evening of December 13, the following members being present: Dr. Wishart, the president; and Drs. Roome, J. B. Campbell, Macarthur, Eccles, Moorhouse, Hodge, Hotson, Ovens, Thomson, Ferguson, Meek, Balfour, Henderson, H. A. Stevenson, W. J. Stevenson, W. S. Macdonald, Kingsmill, and English.

Dr. Wishart opened a discussion on the treatment of appendicitis, referring briefly to twenty-one operative cases which had come under his care during the past seventeen months.

In regard to the gynæcological work done during the past two and one-half years at the London Asylum, the following resolution was unanimously carried:

"Resolved that the London Medical Association, recognizing the humane and effective operative work being done at the London Insane Asylum, for the physical relief of inmates of that institution, and appreciating especially the benefits, mental as well as physical, which have resulted from gynæcological operations among the insane—

"The association hereby solicits the attention of the Provincial Government to the claims of that work, and urges the duty of providing better facilities for its prosecution."

It being the annual meeting, the following officers were elected for the ensuing year: President, Dr. F. R. Eccles; vice-president, Dr. R. Ferguson; recording secretary, Dr. W. M. English; corresponding secretary, Dr. W. S. Macdonald; treasurer, Dr. J. Macarthur.

Book Reviews.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico Chirurgical College, Philadelphia; Attending Physician to the Medico-Chirurgical and Samaritan Hospitals, Philadelphia, etc. Complete in one handsome octavo volume of 1,287 pages. Fully illustrated. Price, cloth, $5.50 net; sheep or half Morocco. $6 50 net. W. B. Saunders,, Philadelphia. Canadian Agents: J. A. Carveth & Co., Toronto.

Professor Anders has given us a very useful and reliable text-book. Only one who is a successful teacher himself could arrange the matter so well. Special attention is paid to differential diagnosis, and fifty-six helpful diagnostic tables are scattered throughout the work. It is the misfortune of every writer of a text-book of medicine to-day that his work comes into competition with that of Professor Osler, which is so deservedly popular as a text-book in England as well as in America. If the brilliant Canadian had not occupied the field Prof. Anders' book would enjoy a greater popularity than we now can venture to predict for it. But it is an excellent book, nevertheless—thoroughly up to date, and a reliable guide to the general practitioner. The typography, printing, paper and binding are all first-class.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS. With especial reference to the application of remedial measures to disease and their employment upon a rational basis, by Hobart Amory Hare, M.D., B. Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia; Physician to the Jefferson Medical College Hospital; Laureate of the Royal Academy of Medicine in Belgium, of the Medical Society in London; corresponding fellow of the Sociedad Espanola de Hygiene of Madrid; member of the Association of American Physicians; author of "A Text-book of Practical Diagnosis," etc. Sixth edition enlarged and revised: Lea Brothers & Co., Philadelphia and New York, 1897.

This work on Therapeutics has been so well received by the medical profession that six editions have been issued in as many years. The author has, by adding the newer well recognized remedies to each new edition, kept the book abreast of the times. The volume is divided into four parts. Part I. deals with general Therapeutical considerations such as modes of administration, dosage, absorption, strength, incompatibles and a classification of drugs under their different Therapeutical heads. We are of the opinion that this part of the work is altogether too brief, and forms the principal fault of the whole volume. We think that more attention should be given to Pharmacology, as we believe that there is only one way of obtaining a good knowledge of Therapeutics

and that is by studying the modes of action of drugs, as well as their antagonistic actions. In part II. all the drugs in general use are arranged alphabetically, and each drug is described as to sources or preparation, Physiological action, Therapeutic, toxic properties, and methods of use. Part III. is devoted to medical measures other than drugs, and includes articles on lavage, transfusion, rest, care, heat, cold, antiseptics, enteroclysis, foods for the sick, climate, springs, counter-irritation and acupuncture. The concluding portion of the book is principally devoted to applied Therapeutics. The diseases are arranged alphabetically, and the treatment of each disease is carefully described. We recommend the work to every student of medicine, but, we believe, that it is among graduates that its most useful sphere exists.

A MANUAL OF MEDICAL JURISPRUDENCE. By Alfred Swaine Taylor, M.D., F.R.S. Revised and edited by Thos. Stevenson, M.D., London; F.R.C.P. London; Lecturer on Medical Jurisprudence and on Chemistry at Guys; Examiner in Forensic Medicine at the University of London; External Examiner in Forensic Medicine in the Victoria University; Official Analyst to the Home Office. Twelfth American, edited with citations and additions from the Twelfth English Edition, by Clark Bell, Esq., LL.D., President of American International Medico-Legal Congress of 1889 and 1893; President of Medico-Legal Congress of 1895 (New York); Honorary Member of the Medico-Legal Society of France; Ex-President of the Medico-Legal Society of New York. In one handsome volume of 832 pages. Publishers: Lea Bros. & Co., New York and Philadelphia. 1897.

Since the issuance of the last edition in 1892 a strong impulse has been given to Forensic Medicine by the International Congress of Medical Jurisprudence, by the Congress of Medical Jurisprudence of New York in 1895, and by the special development of Medico-Legal Surgery in various societies. The increasing frequency of damage cases renders this department of Medico-Legal Surgery of growing importance."

The appearance of a new edition of "Taylor's Medical Jurisprudence," the standard work on this subject, is always looked forward to with interest. The arrangement is all that can be desired. Each topic is considered in a varying number of chapters, each of which is again subdivided into paragraphs, which under a distinct heading deals with some feature of the topic under discussion. A book with this plan is read with comfort, and when in addition we have an excellent index, reference is a very easy and expeditious matter. In the index we have first a list of cases referred to by the English editor, then a list of cases referred to by the American editor, and then the general index, which is a satisfactory one.

In looking over the book, the first subject of interest that catches the eye is that of medical secrets. In British Medical Jurisprudence there are no medical secrets in the eyes of the law. The American editor, in commenting on this, states that in New York State, and in many other states of the Union, physicians, solicitors, and clergymen, are all

placed on the same footing, and are not allowed to divulge secrets even in a court room. He calls on physicians to protect the honor of their patients at all hazards and to trust to the better sentiment of the judge and of public opinion to support them. Full reference is made to the case of Kitson vs. Playfair.

Another interesting subject touched on is the duty of physicians where they suspect that a patient is being slowly poisoned. His advice is—be sure that you have good ground for your suspicions and then communicate them to the patient, or to a reliable friend, or to a magistrate.

Nineteen chapters (175 pages) are devoted to poisons. Almost every poison thinkable is mentioned and some particulars given, while the common ones are discussed fully. Symptomatology, post-mortem conditions, dosage, chemical analysis, are all fully treated. Chemical analysis is especially full, and directions are given for the detection of the poisons as salts or acids in organic liquids, and in the organs removed post-mortem. Clark Bell points out that Wormley, of Philadelphia, demonstrated the fallacy of Reinsch's test for arsenic by showing that octahedral crystals could be produced by this method from antimony, exactly identical in appearance to those produced from arsenic. Strange to say, not a word is said about the use of arsenic in embalming fluids and the difficulties that may arise from this in medico-legal investigations. With this exception, and that of the scant space devoted to carbolic acid, which has become such a common poison on this side of the Atlantic, the subject of poisons is dealt with in a very satisfactory manner. More space might profitably have been given to the subject of ptomaines. Additional matter, however, is given by Clark Bell with a system of classification and tests. An interesting chapter is that on "Noxious Animal Foods."

Fifteen chapters (145 pages) are given to "Wounds and Personal Injuries." The chapter on the examination of blood-stains is exceedingly good. Space will not allow me to dwell on this too long. Directions are given for dealing with all sorts of contingencies that may arise in this connection. In differentiating human blood from that of mammalia, this position is taken that all the medical expert is justified in saying is "that the appearance of the blood in question is quite consistent with that of human blood." I believe that this is the correct position to take. Eight plates, from photo-micrographs of blood of man and of some of the lower animals, are given to show their differences and similarities.

Chapters are devoted to death by drowning, hanging, strangulation, suffocation, etc., and one whole chapter to poisoning by carbonic oxide and other gases (25 pages).

Electricity as a method of inflicting the death penalty is dealt with in one chapter, and full particulars with post-mortem reports are given of the death by electricity of the four murderers in New York in 1891. Although death did not occur instantaneously from a current of 1,485

volts, it is supposed that unconsciousness did. Rigor mortis set in a few moments after death.

Sixty pages are taken up with the subject of "Infanticide and Live Birth," and to the reviewer no part of the volume was found of greater interest. The discussions centre around the hydrostatic test, pointing out its value and the sources of error that may arise. Much new matter is introduced, and reference is made to the closure of the ductus arteriosis and of the foramen ovule, and proper value is assigned to these conditions.

Altogether the book is a satisfactory one. References to cases are short and concise, thus differing from the old English two-volume edition, in which reports of cases were so numerous and so full as to be tedious.

Books received :

A TEXT-BOOK OF THE DISEASES OF WOMEN. By Henry J. Garrigues, A.M., M.D., Professor of Gynæcology and Obstetrics in the New York School of Clinical Medicine ; Gynæcologist to St. Mark's Hospital and to the German Dispensary, New York City, etc. One handsome octavo volume of 628 pages, containing 335 engravings and colored plates. Price, cloth, $4 net ; sheep or half Morocco, $5 net. W. B. Saunders, Philadelphia. Canadian Agents : J. A. Carveth & Co., Toronto.

THE LOFOTEN ISLANDS AND THEIR PRINCIPAL PRODUCTS.—We have received and read with much pleasure an elaborately gotten up pamphlet on the cod industry in the Lofoten Islands. The pamphlet is illustrated freely, and the letter press contains much useful and instructive information. Messrs. Parke, Davis & Co., the publishers, will be pleased to send one of these pamphlets to physicians who have not already received one.

KING'S MANUAL OF OBSTETRICS. New (7th) Edition. A Manual of Obstetrics. By A. F. A. King, M.D., Professor of Obstetrics and Diseases of Women in the Medical Department of the Columbian University, Washington, D.C., and in the University of Vermont, etc. In one 12mo. volume of 573 pages, with 223 illustrations. Cloth, $2.50. Lea Brothers & Co., publishers, Philadelphia and New York.

PATHOLOGICAL TECHNIQUE. *A Practical Manual for the Pathological Laboratory.* By Frank B. Mallory, A.M., M.D., Assistant Professor of Pathology, Harvard University Medical School ; Assistant Pathologist to the Boston City Hospital ; Pathologist to the Children's Hospital and to the Carney Hospital, Boston ; and James H. Wright, A.M., M.D., Director of the Laboratory of the Massachusetts General Hospital ; Instructor in Pathology, Harvard University Medical School. One handsome octavo volume of 397 pages, with 105 illustrations. Price: Cloth, $2.50 net.

A CLINICAL TEXT-BOOK OF SURGICAL DIAGNOSIS AND TREATMENT. By J. W. Macdonald, M.D., Graduate of the University of Edinburgh ; Licentiate of the Royal College of Surgeons of Edinburgh ; Professor of the Practice of Surgery and of Clinical Surgery in Hamline University, Minneapolis, Minnesota. Octavo volume of 800 pages, handsomely illustrated with 328 engravings. Prices : Cloth, $5.00 net ; Half Morocco, $6.00 net. W. B. Saunders, Philadelphia. Canadian Agents : J. A. Carveth & Co., Toronto.

W. B. SAUNDERS, Publishers, 925 Walnut street, Philadelphia, announces the following books :

AN AMERICAN TEXT-BOOK OF DISEASES OF THE EYE, EAR, NOSE, AND THROAT. Edited by G. E. DESCHWEINITZ, M.D., Professor of Ophthalmology in the Jefferson Medical College, Philadelphia ; and B. Alexander Randall, M.D., Professor of Diseases of the Ear in the University of Pennsylvania and in the Philadelphia Polyclinic.

AN AMERICAN TEXT-BOOK OF PATHOLOGY. Edited by John Guitéras, M.D., Professor of General Pathology and of Morbid Anatomy in the University of Pennsylvania ; and David Riseman, M.D., Demonstrator of Pathological Histology in the University of Pennsylvania.

AN AMERICAN TEXT-BOOK OF LEGAL MEDICINE AND TOXICOLOGY, Edited by Frederick Peterson, M.D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York ; Chief of Clinic Nervous Department, College of Physicians and Surgeons, New York ; and Walter S. Haines, M.D., Professor of Chemistry, Pharmacy, and Toxicology in Rush Medical College, Chicago, Illinois.

STENGEL'S PATHOLOGY. *A Manual of Pathology.* By Alfred Stengel, M.D., Instructor in Clinical Medicine, University of Pennsylvania ; Physician to the Philadelphia Hospital ; Professor of Clinical Medicine, Woman's Medical College ; Physician to the Children's Hospital ; late Pathologist to the German Hospital, Philadelphia, etc.

CHURCH AND PETERSON'S NERVOUS AND MENTAL DISEASES. *Nervous and Mental Diseases.* By Archibald Church, M.D., Professor of Mental Diseases and Medical Jurisprudence in the Northwestern University Medical School, Chicago ; and Frederick Peterson, M. D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York; Chief of Clinic Nervous Department College of Physicians and Surgeons, New York.

HEISLER'S EMBRYOLOGY. *A Text-book of Embryology.* By John C. Heisler, M.D., Professor of Anatomy in the Medico-Chirurgical College, Philadelphia.

KYLE ON THE NOSE AND THROAT. *Diseases of the Nose and Throat.* By D. Braden Kyle, M.D., Chief Laryngologist to St. Agnes' Hospital ; Bacteriologist to the Orthopedic Hospital and Infirmary for Nervous Diseases ; Instructor in Clinical Miscroscopy and Assistant Demonstrator of Pathology, Jefferson Medical College, Philadelphia.

HIRST'S OBSTETRICS. *A Text-book of Obstetrics.* By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania.

WEST'S NURSING. *An American Text-book of Nursing.* By American Teachers Edited by Roberta M. West, Late Superintendent of Nurses in the Hospital of the University of Pennsylvania.

Medical Items.

DR. REUBEN PETERSON has removed from Grand Rapids, Michigan, to Chicago.

PROFESSOR WM. OSLER, of Baltimore, spent a portion of his Christmas holidays in Toronto.

DR. L. F. BARKER is President, and Dr. T. S. Cullen Secretary, of the Johns Hopkins Hospital Medical Society.

DR. T. S. CULLEN has commenced practice in Baltimore, Md. He paid a short visit to Toronto during the holidays.

DR. G. H. CLEMENS, formerly of Port Perry, after taking courses in Vienna, Berlin, and London, has returned to Canada, and located in Toronto, 1326 King street west.

Dr. A. McDiarmid, formerly Professor of Obstetrics and Gynæcology in Manitoba Medical College, has removed to Chicago, and is now Professor of Obstetrics in the Post-Graduate Medical School and Hospital.

OBITUARY.

JAMES HEPBURN BURNS, M.D.—The many friends and acquaintances of Dr. J. H. Burns, of Toronto, were very much surprised and shocked to hear of his awfully sudden death in his office, December 20, 1897. His health had not been very good for about five years, but, as a rule, he was able to do his ordinary work in practice up to the day of his death. After completing his "rounds" in the forenoon of December 20, he went into his house, and, going to his telephone, called up central. After ringing the call he fell to the floor, and Mrs. Burns hearing the fall, ran in and found him lying senseless. The physicians, who were immediately called in, found him dead. His death was caused by angina pectoris.

Dr. Burns was born in Oshawa, December, 1845, and was therefore fifty-two years of age. He received his medical education in the Toronto School of Medicine, and the degree of M.B. from the University of Toronto in 1866. After graduating, he went to Neustadt, County of Grey, but soon returned to Toronto on account of the Fenian raid of that year. He was a member of the University Company of the Queen's Own Rifles, but when the troops were going to the front he was appointed Assistant-Surgeon to Colonel Denison's provisional regi-

ment, and, in that capacity, attended many of the wounded at St. Catharines after the battle of Ridgeway. After the raid he practised for a short time in Priceville, County of Grey, and then went to Collingwood, where he practised in partnership with Dr. Stephens for nearly ten years.

He came to Toronto in 1876, and had rather a hard struggle for two or three years. After that, however, his practice increased rapidly and he was soon recognized as one of the leading physicians of the city. In 1880, and again in 1885, he was elected as a member of the Ontario Medical Council. He became Vice-President of that body in 1887, and President in 1888. At the election for 1890, he declined to be a candidate; but, when a vacancy occurred in the Council in 1897 through the resignation of Dr. Machell, he entered the field in opposition to Dr. Spence, and was declared elected a few days before his death. At the time of his death he was also senior consulting physician to the Infants' Home, a member of the consulting staff of St. John's Hospital, and a regular member of the staff of the Toronto General Hospital.

Dr. Burns was genial,affable,and courteous—always popular among his acquaintances. He had many friends and much influence in the profession, and, of course, held the highest honor in the gift of the physicians of this province when he was elected President of the Ontario Medical Council. He earned the confidence, respect, and love of his patients through his kindness of manner and goodness of heart. Jimmie Burns, as his intimate friends knew him, will long be remembered by many who loved him well.

WILLIAM CAMERON CHEWETT, M.D.—Dr. W. C. Chewett, of Toronto, died at his late residence November 30th, 1897. The deceased was grandson of Colonel William Chewett, who came to York in 1794, and son of James Grant Chewett, who was at one time Deputy Surveyor-General of Upper Canada. He was born in Toronto in 1828, and after receiving his preliminary education in Upper Canada College, became a medical student at King's College, and was the first to receive the degree of M.D. from the University of Toronto in 1851. He never entered into active work in connection with his profession. He was the owner of the Rossin House, of Toronto.

ROBERT CHARLES KIRKPATRICK,B.A.,M.D., L.R.C.S.ED.—Montreal has lost one of its most promising young surgeons through the death of Dr. R. C. Kirkpatrick, which occurred December 5th, 1897, from tuberculous meningitis, after an illness of three weeks. He will be remembered as one of the most active local secretaries at the last meeting of the British Medical Association in Montreal. He was educated at McGill, taking both Arts and Medicine. After receiving the degree of M.D. in 1887 he spent some time in Europe, and took the diploma of L.R.C.S.Ed. After his return to Montreal he acted as Medical Superintendent of the General Hospital. After retiring from this position he was appointed Assistant Surgeon, and, later, Full

Surgeon. In 1893 he was appointed Demonstrator of Surgery in McGill, and soon afterwards Lecturer on Surgery.

GEORGE M. SHAW, M.D.—Dr. George M. Shaw, one of Canada's most prominent physicians, died after a very brief illness at his home in Hamilton, January 16. On Tuesday night he went out to see a patient, and soon after his return to his house had a chill, followed by pneumonia, which caused his death on the following Sunday morning. He received his medical education in the Toronto School of Medicine, graduated in the University of Toronto in 1874, and received the degree of M.D. from the same University in 1888. After graduating he practised for about three years in Queenston, and then settled in Hamilton where he practised for twenty years. He was an active member of several medical societies, including the British Medical Association, the Canadian and Ontario Medical Associations. At the time of his death he was representative of the Hamilton Division in the Ontario Medical Council. He was long recognized as one of the best physicians of Hamilton, and was highly respected by all classes in that city. Dr. Shaw, as a student and as a practitioner, was much beloved by those who knew him intimately. He was a straightforward, honorable, and highminded man, and at the same time an honest, faithful and excellent physician. The writer, who had the privilege of knowing him for twenty-six years, feels that he has lost one of his best friends. Many others in Hamilton, Toronto and other parts of Canada, are in a similar position. We can scarcely realize as yet that he who was amongst us a few days ago, in his usual health and vigor, has gone to the unseen land. He leaves a widow and four children, who have the heartfelt sympathy of many friends for the appalling calamity which has befallen them.

WILLIAM S. TREMAINE, M.D.—Few surgeons of the United States were so highly respected by the Profession of Canada as Dr. Tremaine in Buffalo. He was born in Prince Edward Island, Canada, but spent nearly all his life on the "other side of the line." He went to Boston in his early youth, and received his medical education in the University of Pennsylvania, from which he graduated in 1861. He held various positions in the United States Army from 1864 to 1881. In the latter year he settled in Buffalo and was soon recognized as one of the leading surgeons of that city. He was one of the founders of the Medical Department of the Niagara University, in which he was professor of surgery. Although he suffered for some years from the effects of yellow fever, and cholera, contracted while in military service, he was a fairly healthy man, and his sudden death, which occurred January 8, caused a great surprise and shock to his numerous friends in all parts of America. He was sixty years of age.

THE

CANADIAN PRACTITIONER

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MANAGER ADVERTISING DEPARTMENT:
MR. W. LLOYD WOOD.

PUBLISHERS:
THE PRACTITIONER PUBLISHING COMPANY,
TORONTO.

VOL. XXIII.] FEBRUARY, 1898. [No. 2

Original Communications.

THE PROGNOSIS IN CARDIAC DISEASE. *

BY J. E. GRAHAM, M.D., M.R.C.P., LOND.,

Professor of Medicine and Clinical Medicine, University of Toronto; Physician to the Toronto General Hospital, and St. Michael's Hospital.

THE attention which has of recent years been paid to prognosis in heart disease and the increase of our knowledge with regard to it has led me to its choice as the subject for discussion this evening. Notwithstanding the progress which has been made, the prognosis in cardiac disease is still probably one the most difficult questions in clinical medicine. The fact that some of the most serious and suddenly fatal forms of disease are at times preceded by so few symptoms will always make it difficult to foretell the result in this class of cases. I am convinced that many points brought forward in this paper are already well known to you. It is, however,

*Read before the Toronto Medical Society.

important that we should at times take stock of our knowledge of the principal subjects in medicine. It is very evident, as remarked by Dr. Skerritt in the Bradshaw lecture, prognosis depends upon a correct diagnosis. As it is difficult to separate the two I shall refer briefly to some of the diagnostic points which are more intimately connected with the prognosis in certain cases.

(1) In the first half of life, valvular lesions are the result of endorcarditis, and the prognosis during the attack depends largely upon the nature of the infective agent. If endocarditis occurs during an attack of rheumatism, the immediate prognosis is favorable, but the liability to the occurrence renders the future more uncertain. It is well known that when endocarditis occurs in the first attack of rheumatism recurrences of this disease are usually accompanied by fresh attacks of inflammation of the endocardium. Rheumatic endocarditis in young children is often fatal, due to the presence of peri and myocarditis. After forty years of age recurrent attacks of rheumatism generally cease. When they do occur they are not so likely to be accompanied by a fresh attack of endocarditis.

On the other hand, endocarditis which results from scarlatina is not likely to recur, and, other things being equal, is on that account more favorable than the form due to rheumatism. The prognosis in endocarditis due to other infective agents depends largely upon the particular micro organism present, as well as the resisting power of the constitution. In this connection, I would briefly mention two or three cases of chronic infective endocarditis in my practice in which the fatal termination occurred after an illness of six or eight months.

Physicians have for years noted the presence of systolic bruits which have occurred during the course of rheumatism, and have disappeared, leaving the heart apparently healthy. It is difficult to determine whether these bruits have been caused by changes in the valves or by a special condition of the blood.

Then, again, even when the endocardial murmur exists throughout the greater part of an acute attack, complete recovery takes place in a certain proportion of cases. Latham in a series of sixty-three cases records that "perfect reparation occurred in seventeen, for in those the murmur ceased entirely." Gibson records twenty-five recoveries out of fifty-one from mytro-carditis (Skerritt).

I have myself observed cases in which a murmur occurred during an attack of rheumatism and lasted in some cases a few days and then disappeared. In one case, that of a girl twelve years

of age, the mitral murmur commenced on the sixth or seventh day, continued throughout the attack and disappeared within a month after the patient left her bed. I examined her heart a year subsequently and found no evidence of disease.

On this account the attending physician should not alarm the friends of the patient by predicting serious heart disease because he discovers a murmur during an attack of rheumatism. On the other hand it must be remembered that in nearly all the cases where the murmur lasts from the beginning to the end of an attack it never disappears in after life. Walsh has made the statement "that an indubitable endocardial murmur holding on from the beginning to the end of an acute disease never so far as I have known totally disappears in after life." This has been considered by Skerritt and Byron Bramwell to be too absolute. One would, however, infer that of the number of such cases recovery is limited to a few.

The prognosis during the period of establishment of compensation depends largely upon the treatment adopted; and upon the behavior of the patient. A few moments of over exertion during this stage may very much increase the gravity of the prognosis.

When a patient comes to us in whom complete compensation has been established the question to be decided is how long will such compensation last? or in other words, "what is the expectation of life in such a case?" To determine this we should first find out if possible (1) (*a*) the extent of the lesion, (*b*) the length of time during which it has existed, (*c*) the changes which have taken place in the heart itself as the result of the lesion. (2) The condition of the other organs of the body, (3) the temperament, mode of life, habits, and calling of the patient, (4) hereditary tendencies, (5) presence or absence of other disease.

(1) (*a*) Can we by auscultation estimate the extent of the valvular lesion? By auscultation alone we can not arrive at a very definite conclusion, but when it is considered along with the length of time which the disease has been in existence and the changes which have taken place in the heart, it is a most valuable means of prognosis. It has been stated by many writers that the prognosis in cardiac disease has not been advanced by the use of the stethescope. This has been ascribed to the fact that since the introduction of auscultation the physician has paid less attention to the general condition of the patient than formerly. When, however, to the powers of observation possessed by the older physicians, we add auscultation and percussion, we certainly have greater advantage

in the prognosis of cardiac disease. The estimation of the extent of lesion during compensation is often of importance. The extent of the lesion, however, is not of so much importance as the completeness of the compensation estimation.

Patients often consult physicians as to what business they should pursue, or whether they are fitted to undertake a certain kind of work. For instance, within this last year, a missionary who had returned from India consulted me as to whether he should again take up his work in that country. He had a mitral insufficiency, which from its character, made out by auscultation, as well as by the history of the patient led me to the conclusion that the lesion was a slight one and I advised his return to his former work.

The estimation of the extent of lesion has been given in a most able manner by Broadbent, and I have made free use of his recent work on heart disease in writing this paper.

I shall first take up mitral insufficiency, the most frequent and the least serious of the valvular lesions. It is also one in which the development of subsequent changes is slower than in any other.

How can we, when the patient is in good health, estimate the extent of the disease? A small amount of regurgitation is indicated when the bruit is late, almost of a post-systolic character; when it is musical, when there is a small volume of sound, the heart being nearly normal in size, and there being no other evidences of serious lesion. It must be remembered that the soft murmur of small volume sometimes occurs in extensive mitral lesions, when the force of the valvular contraction is not great and the heart is much enlarged. A most serious condition would then be indicated.

So far, then, as the volume of sound is concerned, cases of mitral insufficiency may be divided into three classes: (1) A slight murmur in an apparently fairly healthy heart, indicating small lesion. (2) A loud murmur heard at the apex, under the angle of the scalpula, and at the spine, indicating an extensive lesion, dilated ventricle, and a strong myocardium. When the bruit takes the place altogether of the second sound it indicates a want of closure of the valves, and consequently a more serious lesion. (3) The soft blowing sound with a dilated heart indicates a weak myocardium, and, consequently, extensive disease.

Sometimes a very loud mitral regurgitant murmur may exist when the lesion is slight. Parrott mentions a case in which the sound was loud enough to be heard across a billiard table. The patient lived twenty years, and died from acute dilatation, the result of over-exertion. I reported a case last year to this society in which

a late systolic murmur could be easily heard across the table. I have since examined the patient and found that the murmur had disappeared.

The musical sound of the mitral murmur is usually produced by a narrow, slit-like opening caused by the segments of the valves not closing completely; it is thus an indication of a slight amount of regurgitation. It may result from one of the chordae tendinae in the current of blood.

The accentuation of the pulmonary second sound is usually of value in diagnosing a very slight from a very large amount of regurgitation.

When the right ventricle has to some extent given way, the pulmonary second sound may not be heard at all, indicating a most serious condition of the heart.

The character of the pulse is of some importance. When there is much regurgitation, the volume of the pulse is less and the tension diminished. Irregularity of the pulse is a sign of failing compensation, and is produced, according to Potain, by the influence of the respiration on the filling and emptying of the chambers of the heart.

Mitral incompetence, when not the result of mitral lesion is due to dilatation of the ventricle, which may result from lesion in the other valves, from anæmia, acute febrile diseases and old age. When found in anæmia and acute febrile disease, complete recovery may take place. In old age mitral incompetence may exist when there is moderate dilatation of the ventricle, as explained by Balfour and McAllister. It may exist for years, always indicating a weakened myocardium.

AORTIC STENOSIS.

In this lesion, very little reliance can be placed upon the volume of sound. I had a case recently under observation in which the aortic systolic murmur was so loud that it could be distinctly heard near the spine at the lower portion of the thoracic aorta. In post mortem examination there was no stenosis but simply an ulcerated roughened condition of the valves. It should be remembered as a fact in diagnosis than an aortic systolic murmur indicates stenosis in a certain proportion of cases only. If, however, a loud systolic aortic murmur becomes decidedly lessened in volume it may indicate a weakening of the myocardium and consequently a serious prognosis. The writer has seen two cases in which the aortic valvular segments had almost entirely shrunken up, leaving a comparatively smooth surface. The aortic systolic murmur which had previously been present, had

disappeared. In the first case the disease was due to atheroma and in the second to syphilis.

As long as there is compensative hypertrophy indicated by the size and shape of the left ventricle the apex beat being downwards into the left, the continued loudness of the murmur thus in the absence of constitutional disturbances, indicate a fairly good prognosis. The pulse in aortic stenosis is small, long and tense. Its tension indicates the strength of the right ventricle in driving the blood through a narrow orifice.

The presence of dizziness and attacks of fainting are signs of cerebral anæmia and therefore of a more serious lesion.

MITRAL STENOSIS.

Broadbent divides the disease into three stages: (1) that in which the aortic second sound is heard clearly at the apex; (2) the aortic sound absent at the apex; (3) that in which the presystolic murmur is absent. He is of opinion that the second sound heard at the apex is produced by the closure of the aortic valves and that the pulmonary second sound is not often heard even when accentuated. So long as the first stage exists there is little danger. When, however, the aortic second sound is no longer heard at the apex, it indicates either that the right ventricle is so much enlarged as to prevent the left ventricle from conducting the sound to the wall of the chest; or that, owing to the small amount of blood passing from the left ventricle into the aorta, the valves do not close with sufficient force to cause the sound to be heard at the apex. When the presystolic murmur, which lasts throughout the whole interval being both diastolic and presystolic, it is of serious prognostic importance. This occurred in a patient in the Toronto General Hospital whom I had under my care last winter and who died suddenly from a slight over-exertion.

The disappearance of the presystolic murmur is the result of dilatation of the right ventricle and tricuspid incompetence. In this way the pressure is removed from the pulmonary circulation and the blood is not propelled with sufficient force through the auriculo ventricular opening to cause a murmur. The accentuation of the pulmonary second sound, perhaps the sound itself, would disappear at the same time.

The prognosis in mitral stenosis is not so favorable as in regurgitation (1) on account of the tendency of the opening to become smaller; (2) in mitral regurgitation the force of the right ventricle acts in two ways, it resists the reflux into the ventricle, and fills the

ventricle more rapidly in diastole. The prognosis of stenosis is not so favorable in children as when it occurs later in life. In the former cases more narrowing takes place, and the opening does not increase in size in proportion to the heart in general. The pulse is usually small, and may be compressible or tense. The latter condition Broadbent thinks is due to the resistance in the capillaries. The presence of the tricuspid regurgitant murmur, and of the venous pulse in the neck, the absence of accentuated pulmonary second sound, indicating the third stage of the disease, is of grave import. When in addition there are signs of pulmonary hæmorrhage, hepatic enlargement and dropsy, the prognosis is grave.

AORTIC INSUFFICIENCY.

The long, loud murmur is often more favorable than the murmur difficult to hear, because it indicates a strong left ventricle to propel the blood into the aorta; a normal elasticity of the latter in producing the regurgitation. When the murmur takes the place of the second sound the amount of regurgitation is greater than when the click of the closing valves is heard in addition to the bruit. The closure of the valves is heard more readily over the crotid. The size of the heart when compensation has taken place is in proportion to the regurgitation. The presence of the presystolic and systolic murmurs indicate great dilatation of the left ventricle, and are consequently of serious import. The pulse should be carefully examined. When it is distinctly collapsing in character it indicates a great amount of insufficiency. Three conditions may prevent a collapsing pulse in cases of grave prognosis: (1) Aortic stenosis preventing the return of the blood to the heart. (2) The failure of the heart muscle, on account of which the blood is not propelled with sufficient force to produce a collapsing pulse. (3) The loss of elasticity of the vessels may prevent our noticing the collapse. The delay of the pulse is caused by the empty state of the vessels, as well as through their large size and want of tone. This delay can easily be detected by placing one hand over the heart, the fingers of the other over the radial pulse. It is more marked when there is a large amount of regurgitation. Irregularity of the pulse, both in frequency and in force, occurs in the latter stages of the disease.

The presence of aortic stenosis has sometimes a beneficial effect on regurgitation, as it prevents the rapid emptying of the aorta into the left ventricle. Broadbent mentions a case of aortic regurgitation in which the patient was in constant danger from syncope, and who after the establishment of a stenosis lived in comparative comfort

When, however, the narrowing is great, it has an unfavorable effect in regurgitation.

The comparative prognosis of the different valvular lesions is difficult to estimate, as it depends so much upon other conditions. It may be stated in general terms that the following is the grade of gravity: tricuspid insufficiency, aortic insufficiency, mitral stenosis, aortic stenosis, and mitral insufficiency. Tricuspid regurgitation is a severe lesion, as it is the result of serious changes in the mitral and aortic valves. When it occurs as an independent disease it is also of serious import, because the walls of the right ventricle do not undergo compensative hypertrophy in the same way as the left. When aortic disease results from syphilis the prognosis, so far as my experience goes, is unfavorable. Such cases are frequently complicated with aneurism. They are not much influenced by anti-syphilitic remedies.

Aortic insufficiency is less dangerous when it comes on in early adult life because compensatory hypertrophy takes place more readily than in later years. The writer had for many years under observation a patient suffering from aortic insufficiency with a very much enlarged heart, in whom the condition followed rheumatism when the patient was twenty years of age. He died at sixty-five of Bright's disease and arterial sclerosis. The long life of the patient was largely due to his habits and mode of life. He held a government position which required short hours and light work. At the same time, it must be stated, that he had at times epileptic seizures and was subject to violent attacks of passion. The presence or absence of giddiness and fainting should influence the prognosis.

Although we may obtain many facts which may assist in prognosis from physical examination of the heart, we should never rely upon them alone, but should take into consideration not only the history of the origin of the disease but also the length of time it has been in existence. The changes which have taken place in the heart, as well as in other organs of the body, should be carefully investigated. During childhood and early adult life, as previously stated, valvular lesions are generally the result of inflammation, and the prognosis is more favorable than in those which occur after middle life, which are often caused by degeneration when the recuperative power of the heart is much diminished. The presence of lesion, of two sets of valves, of course, increases the gravity of the case. Cases have been recorded of patients living many years suffering from double lesions.

The length of time which the lesion has existed is of great im-

portance, as we can thereby estimate the rapidity with which the changes have been produced in the heart. If, for instance, the lesion is known to have been in existence for five years, thus causing a small amount of cardiac enlargement, and the patient is in good health, we could consider the prognosis favorable until the age of fifty or sixty when degenerative changes usually set in. The question then arises: "Is it possible for changes to have taken place in the valves subsequent to the primary endocarditis?" "Is there such a condition as chronic endocarditis, a slow process whereby the regular lesion may become more extensive?" In mitral stenosis, especially when it comes on in childhood, either further contraction takes place or else the opening remains stationary while other portions of the heart develop. Mitral stenosis, therefore, which comes on in childhood is more serious than that which originates in early adult life. It is quite probable that from year to year changes do take place in the affected valves, either as the result of chronic or subacute endocarditis. In valvular lesion, when the heart is easily thrown off its balance, so to speak, the prognosis is more grave.

(*c*) The changes which take place in the size and condition of the heart can usually be estimated by careful physical examination made from year to year, noting the results, and if within, say, five or ten years in middle life, there is no change the prognosis will be probably good until degeneration ensue.

Rupture of a segment of valve is usually fatal, although cases have been recorded in which patients have lived weeks after such a lesion.

(2) CONDITION OF THE OTHER ORGANS OF THE BODY.

Enlargement of the liver, venous stasis, œdema, albuminuria, are of course unfavorable symptoms, when they follow the period of compensation are serious symptoms. If these conditions have been caused by overwork or if rest is followed by a decided amelioration of symptoms, the prognosis is more favorable. Not long ago a gentleman came to my office whom I at once recognized as a patient who had been under my care five years before. He was then suffering from mitral insufficiency, cardiac dilatation, irregular pulse, dyspnœa, cardiac liver, and some general anasarca. He was under treatment some weeks with little benefit. My surprise at seeing him so well may be imagined when I tell you that I thought he must have been dead some years. He informed me that he had spent part of his time in doing night work in editing a large paper, and part of the time in tramping through the forests of

northern Ontario prospecting for gold. I found the mitral murmur still present, but the heart was beating in a fairly regular manner. He was a man of more than ordinary intelligence and will power, and his fair state of health was explained by his mode of life. He said that although he at times took long tramps, he never walked a step after he felt the slightest discomfort in the cardiac region. If those sensations came on while he was walking in the rain, he would sit down and rest. He thus carried out Oertel's exercise treatment in a most intelligent manner. If the patient had not had an excellent idea of his cardiac trouble and of the method of cure, he would in all probability have at some time acted imprudently and have been carried off. The liver should always be examined, as it is often an indication of the condition of the right ventricle.

(3) THE SOCIAL CONDITION OF THE PATIENT MAY BE AN IMPORTANT FACTOR.

If he has plenty of means and the wish to take proper care of himself he will probably live much longer than the one who has to struggle to support himself and his family.

On the other hand, a wealthy man may become indolent, eat and drink too much, thus weakening the myocardium. Not long ago I examined a child in my office in whom compensation appeared to be completely established after an endocarditis and valvular lesion. The father told me that the child had been allowed to play and exercise just as if nothing had been the matter. No doubt in this case compensation had been easily established, and the child had not overstrained the heart muscle. Personal habits play an important part, especially the use of tobacco and alcohol. I am firmly convinced that the deleterious effect of the use of tobacco is much underestimated, and that it is frequently the cause of serious changes in the heart. Whittaker mentions the fact that a man may indulge in smoking for fifteen or twenty years without injurious effect, when suddenly symptoms of nicotine poisoning may develop, although there has been no increase in the amount of tobacco used. Lauder Brunton refers to Prof. Fraser's student friends, all of whom gave up smoking at about fifty, except one who shortly afterwards died suddenly. I have myself noticed that many heavy smokers have to give up the habit at fifty or fifty-five on account of heart symptoms. Alcohol has an injurious effect, especially in the production of arterio sclerosis. It may be stated by way of conclusion that the patient of regular habits who does not use tobacco, who is either a total abstainer or a very moderate user of alcohol, possess-

ing an even temper, whose calling requires a moderate amount of regular exercise, who lives among healthy surroundings, who has freedom from worry, is one who, other things being equal, stands the best chance of long life. Sex has an important bearing. Mitral stenosis occurs more frequently in the female and aortic insufficiency in adults. Broadbent says when the valve disease comes on in childhood girls break down at the period of puberty more often than boys.

(4) HEREDITARY TENDENCY PLAYS AN IMPORTANT PART IN THE PROGNOSIS OF CARDIAC DISEASE.

There are two conditions which have a very deleterious effect upon a heart weakened by valvular disease, arterial sclerosis and Bright's disease; the former is very often of an hereditary character, and its occurrence in several members of a family will seriously influence the prognosis.

There is one element of doubt in all cases of valvular disease which can not be gotten rid of, viz., the possibility of an attack of infective endocarditis which may occur at any time from the accidental introduction of diseased germs into the circulation. It is well known that the valve already injured often becomes the seat of an ulcerative process.

Sometimes the cardiac symptoms are altogether out of proportion to the extent of the valvular disease. A patient who has a very slight mitral lesion may suffer from palpitation and irregular action, perhaps largely the result of digestive disturbances. The value of estimating the extent of lesion is apparent in such cases, which at first appear more formidable than they really are. Sometimes again grave symptoms, such as dyspnœa and tendency to syncope may exist and may not be entirely due to cardiac lesion. The temporary character of the symptoms are an indication of their comparative unimportance. On the other hand it may be here stated that cases occur after middle life of failing in health, in whom signs of dyspnœa, a feeling of oppression, exist when there is no valvular lesion. The prognosis in such cases may be extremely grave.

The prognosis in the various valvular lesions is much influenced by the presence or absence of other diseases, particularly anæmia, bronchitis and Bright's disease. In old people, when there is a natural limit due to weakening of the myocardium an attack of bronchitis will precipitate the most serious symptoms. The presence of a high tension pulse, from whatever cause, is unfavorable, as extra work is required of the heart. This condition may be brought about by over-feeding, as well as by alcoholic indulgence.

VALVULAR LESIONS WHICH HAVE ORIGINATED AFTER THE MIDDLE PERIOD OF LIFE.

These are usually the result of various forms of degeneration, and lesions of the aortic occur more frequently than those of the mitral valve. Such lesions are often the direct result of an infection, and, when systolic and diastolic aortic murmurs occur in an elderly individual and are accompanied by fever, a very guarded prognosis should be given as to the immediate result. This may be illustrated by two cases which came under my care within recent years. In the first, aortic disease developed and was easily discovered by the presence of a double bruit. There was little or no elevation of temperature. The patient lived four years when sudden death occurred from the rupture of an aneurism in the descending portion of the arch of the aorta.

In the second case, the aortic disease came on in the same way, but was accompanied by moderate febrile disturbances. The temperature ranged from 97 in the morning usually to 100 or 101 in the evening. The blood was examined for micro organisms and none were found. The disease ran a rapid course and death ensued within three months, apparently from heart failure. One of the coronary arteries was obstructed by an embolus. The aortic valves were almost completely destroyed, and streptococci were found in the ulcerated surface as well as in the emboli. The only difference between these two cases clinically was the presence of fever in the second. Aortic disease, when it accompanies degeneration of the arteries, is probably of slow development. As a rule, however, when the patient presents himself for examination, the changes have already taken place. In cases of double aortic bruits one should always consider the possibility of an aneurism on the sinuses of Valsalva. Some years ago in the out patient clinic in the Toronto General Hospital, I was examining a man who was standing with his chest bared in front of me. I found a double aortic murmur and concluded that I had a case of aortic disease to deal with. The patient suddenly fell on the floor and appeared to be almost moribund. He was carried upstairs to bed, and died some hours afterwards. A ruptured aneurism, about the size of a lemon, was found at the sinus of Valsalva. The aorta throughout should be examined for aneurisms in such cases

It may be stated, as a general rule, that when the valvular lesion takes place after middle life, the prognosis is much less favorable than that which occurs in the early adult. A mitral systolic

murmur not unfrequently develops in the senile heart as a result of dilatation of the left ventricle. As has been pointed out by Balfour, this bruit in some cases is first heard about the third interspace and afterwards at the apex. Mitral incompetence may be shown by the presence of a murmur when there is but moderate dilatation of the left ventricle. This dilatation may be due to degeneration of the myocardium, to depressing mental emotions, and to sudden over exertion. Such a murmur, as a rule, indicates a weakened condition, but I have known many patients live for years when it is present.

We will now take up that class of cases in which there is serious disease of the myocardium when no valvular murmurs can be heard. The weakness of the myocardium may be due to fatty degeneration, which may be local or general. The local form of fatty degeneration is the result of endarteritis or atheroma in the coronary vessels. Rupture of the heart, which occasionally takes place, is usually due to this local form of degeneration. The diagnosis of such conditions is extremely difficult, and on that account a prognosis is not usually made. General fatty degeneration is often the result of an acute infectious disease, as typhoid fever. Its presence is manifested by the character of the first sound and of the effect of exercise upon the heart's action. A general fatty degeneration of the heart muscle is sometimes found in elderly people and results in sudden death when the patient has never consulted a physician with regard to his disease. An instance of this form made a deep impression upon me some years ago. I was called to see a gentleman over seventy years of age, who was suffering from a slight attack of bronchitis. I examined the chest, but did not make a special examination of the heart as my attention was not directed to it. The patient was in bed at the time. He spoke in a jocular way about his daughter being unnecessarily frightened and having sent for me without cause. I must confess that at the time I thought he was right. I heard nothing further of the case until three weeks afterwards, when I was hurriedly summoned in the morning to find that the patient had died in the night. The bed clothes had not been disturbed, and death had taken place instantaneously without a struggle. At the post-mortem examination extreme fatty degeneration was found. I could not well find out why the daughters were anxious, and all the explanation which they could give was that for the last few weeks they noticed that he was changed. He had also felt a slight weakness from over-exertion on one occasion a week before his death.

Attacks of syncope are certainly dangerous when they occur in elderly people who have symptoms of a weakened myocardium. They are not, however, so dangerous when the patient is a member of a family subject to attacks of fainting.

The prognosis in angina pectoris depends upon whether it is of a true or false character. By the term true angina pectoris we simply mean the collection of symptoms which usually occur in those over forty years of age in whom there are evidences of organic heart disease. When angina occurs as the result of over-fatigue only, or of excitement or indigestion, the attacks may be warded off by removing the cause. The prognosis also depends upon the care which the patient takes to avoid exercise immediately after meals, to avoid over-exertion, especially walking against the wind. When angina occurs in aortic valvular disease it sometimes runs a protracted course. Occasionally the cases of so called "false angina" are not free from danger. Huchard states that when there is marked tension of the pulse during an attack there is some danger. The cases which cause the greatest apprehension are those in which the cardiac impulse is slight and the sounds are weak.

SUDDEN DEATH.

One of the most frequent questions asked by a patient and his friends is with regard to the possibility or probability of sudden death. If we can assure the patient that in his particular form of disease sudden death is not probable, it will have a wonderful influence in relieving his mind. In all cases of advanced cardiac disease—for instance, those with dyspnœa, dropsy, pleuritic fusion—there is a possibility of sudden death. Walsh was of the opinion that where none of the symptoms of advanced disease existed, sudden death was not likely to occur in any of the valvular lesions, except in that of aortic incompetence.

It may be safely stated that there is no danger from sudden death, in the sense of falling down dead, in any of the valvular lesions except aortic incompetence. It may occur during a prolonged diastole from cerebral anæmia, or it may be caused by disease of the coronary arteries.

The post-mortem records of 151 cases of valvular lesions in St. Mary's Hospital: aortic regurgitation occurred in thirty-eight of these; in thirteen death was more or less sudden. In eleven cases of aortic stenosis there was no instance of sudden death. In fifty-three cases of mitral stenosis there was only one case of sudden death. In my own experience, death occurred suddenly in three cases of mitral stenosis; but in all three there had been serious symptoms before death.

Of mitral insufficiency there were forty-one cases; of these, two died suddenly. In my practice I remember but one sudden death from mitral insufficiency, and that was after the appearance of general anasarca and pleural fusion. I have only known of one case of sudden death, in the sense of dropping down dead while in apparent health, in valvular lesions, and that was in a case of aortic incompetence. Death occurs suddenly in those cases where there is no valvular lesion—cases of angina and fatty degeneration, of which I have already spoken. In our examination of the heart, we are too prone to look for murmurs, and do not try to find out the condition of the myocardium. If we noticed more carefully the result of exercise—the result, for instance, of arrested movements—as well as to pay attention to the character of the heart sounds, we might arrive at more correct conclusions. There are some conditions of the heart which it will always be impossible for us to diagnose, and this fact, taken together with our inability to foresee the onset of acute disease, or the after surroundings of the patient, will render the prognosis of cardiac disease in many cases extremely difficult, if not impossible.

A few words on the prognosis of cardiac neuroses. Palpitation is not usually of serious import, so far as the length of life is concerned, but it is often difficult to remove the cause. The pulsus paradoxus of Kusmaul usually indicates a weak heart, with pericardial adhesion. Such a patient is more liable to succumb to an acute disease.

Bradycardia is not unfrequently found in the convalescence from acute disease. The paroxysmal form when it occurs in elderly people usually terminates fatally.

Paroxysmal tachycardia often terminates fatally. A case of this kind came to my office several times during an attack, when the pulse was 160 and over. The attacks, which were at first monthly, became more frequent, and she died of cardiac dropsy.

I would here briefly refer to that large class of nervous cases in which palpitations and arythmia result from conditions outside of the heart, such as dyspepsia, uterine diseases, etc. The most careful examination should be made to exclude organic cardiac disease before an absolutely favorable prognosis is given. Otherwise a sudden and fatal termination may take place in what seems to be a purely functional case. Arythmia is more grave than palpitation. Gravity depends on whether the cause can be removed or not. When due to alcohol, tea, or coffee, or to indigestion, careful treatment may cure it. When due to heart failure and Bright's it is a serious symptom. It must be remembered that we occasionally have cases of arythmia in people who live for years.

Fœtal arythmia indicate a very late stage of valvular disease with dilatation due to weakness from fevers,

SPONTANEOUS RUPTURE OF A FATTY HEART.*

By W. J. Greig, B.A., M.D.,
Toronto.

THIS specimen is a unique one. So far as I have been able to ascertain no similar case has ever been reported. This heart was removed from a woman sixty years of age who died suddenly while I was in the act of passing a soft rubber stomach tube. I had just remarked to the sister of deceased that the tube had now reached the stomach, when I saw a pallor spread over the face and her eyes roll up. Knowing that something unexpected had occurred, I removed the tube hastily, drew the patient flat on her back, made use of every known means to resuscitate her, but she was dead.

In other cases I have experienced far greater difficulties in passing the tube than in this instance. There was some retching, but it was not excessive.

Rupture of the heart occurs during exertion or during the vascular excitement consequent on an emotional cause. A writer in the new American System of Medicine says that it has occurred during sleep. I have no doubt but that vascular excitement was the direct cause in this instance. It might be asked what effect the retching had in producing this result. As a physiological act prior to retching or vomiting a full inspiration is taken, which enlarges the chest cavity and depresses the diaphragm. The glottis and diaphragm are fixed, and, the abdominal wall contracting, the stomach is pressed against the rigid diaphragm. It is evident that the muscular exertion of retching could not have any effect on the heart, as the pressure surrounding the organ would be practically the same as during normal inspiration and expiration.

We are more concerned with the pressure in the heart cavities. Increased vigor of the muscular contractions associated with increased arterial tension, thus offering greater resistance to the blood flow is, to my mind, the physiological explanation.

*Read before the Toronto Pathological Society.

Aside from these questions there must be some pathological changes in the heart wall that make such an accident as this possible. Zeigler states that it is always preceded by disease of the coronary artery, which causes areas of anæmic necrosis with softening. Brouardel, the eminent French medical jurist, who has had an enormous experience in investigating cases of sudden death, states that rupture is always associated with patches of fibroid degeneration following chronic myocarditis. As a white infarct sometimes results in softening, especially if the area is large, and sometimes in a scar the product of fibroid changes in the anæmic area, it is seen that the apparent contradiction between the two statements is easily explained.

Again, fatty degeneration is a common cause. Quain collected one hundred cases of heart rupture, and of these seventy-seven had fatty degeneration, and sixty-six of them were in people over sixty years of age. Osler also states that this is the common cause.

In this case extensive fatty changes had taken place in the liver and heart.

There was nothing in the appearance of this woman to make any one suspect that degenerative changes were present. She was not very fat, and so far as I knew had no disease except the gastritis for which I was treating her at the time.

A NOTE ON DEATH FROM CHLOROFORM.*

By R. D. Rudolf, M.D. (Edin.)
Toronto.

DR. RUDOLF presented frozen sections of a dog which had died during the early administration of chloroform. The specimen showed enormous distension of the right side of the heart, both auricle and ventricle. The left side was nearly empty. The dog, a mongrel animal about forty pounds in weight, was given chloroform while in a thin sack. He struggled violently at first, breathing hard the while, but suddenly the breathing became shallow and ceased. He was at once taken out of the sack, the tongue was forcibly drawn out and artificial respiration was used for several minutes without avail. The heart could be felt beating through the chest wall for several minutes after the natural breathing had ceased. Here was a case of death from chloroform in an apparently vigorous animal which struggled violently and in which respiration failed sometime before the heart quite ceased to beat.

Cases of *early* death are, in man, the common ones, in one year thirty-nine out of the forty-one recorded cases of death under chloroform occurring before the surgeon had commenced to operate. They most frequently occur in strong subjects who struggle violently. As regards death from chloroform in general, much difference of opinion exists as to which of the vital functions ceases first.

(1) In *late* death, *i.e.*, that occurring after complete anesthesia has existed for some little time, a great fall of blood pressure occurs and then the respiration ceases, and lastly the heart stops. Whether the respiration ceases as a result of the lowered blood pressure, as Leonard Hill states, or from direct poisoning of the centre by the drug, as the Hyderabad Commission would have us believe, seems doubtful—probably both causes help. The speaker showed a tracing taken from the carotid artery of a dog showing the fall of blood pressure with stoppage of respiration which occurs when chloroform is pushed.

* Read before the Toronto Pathological Society.

(2) In the more common form of death—the *early* one, the exact cause of dissolution is much more uncertain. The Hyderabad Commission say that, here also death is a respiratory one, and certainly the breathing appears to cease, in the majority of cases at least, before the heart does so. Others attribute it to the large dose of the drug which is taken in by the patient as he breathes hard during or after struggling, directly poisoning the heart muscle. During violent exertion a healthy person after a stage of great shortness of breath begins to breathe more easily, gets as it is said, "his second wind." The temporary distress is due to engorgement of the right side of the heart, the wall of which after a time rising to the emergency contracts more forcibly, driving the blood on and thus relieves the engorgement and hence the distress lessens. Now if his heart be weakened ever so little by disease or drugs, *e.g.*, chloroform, or the respiration be in any way interfered with, again *e.g.* by chloroform, then this extra factor may act as the last straw and cause the engorged right heart to give up the struggle.

The fact that the impulse of the heart may be felt through the chest wall must not be taken as a criterion that the organ is doing its work, as it may be *ineffectually* endeavoring to relieve the engorgement of its cavities.

Be the exact cause of death from chloroform what it may, some alteration in the breathing seems in most, if not in all, cases to herald the danger, and hence the great importance of watching the respiration, whatever theory the anesthetist may hold as to the actual cause of the danger threatened.

The speaker concluded by remarking that in a number of dogs which he had been experimenting upon, chloroform had different effects, some being much more susceptible to the drug than others, and he suggested that the very contrary results obtained by very trustworthy observers in different quarters of the world might be partly, at least, explained by the use of dogs differing very widely in their natures—the Indian pariah being a very distinct creature from the London fox terrier.

Possibly, also, the several races of mankind and different individuals of the same race may vary in their susceptibility to chloroform as does also any given individual vary at different periods of his life.

THE SELECTION OF AN ANÆSTHETIC. *

By H. Crawford Scadding, M.D.,
Anæsthetist Victoria Hospital for Sick Children and St. Michael's Hospital.

IN the selection of an anæsthetic, one is very prone to use that agent with which he is most familiar, without regard to the safety of the patient, the nature of the operation, or the convenience of the operator. Speaking of general anæsthetics, we shouid give that which is safest, providing the nature of the operation and the method of operating offer no contrary indication. Although a large number of agents have been used to produce anæsthesia with varying degrees of success, we are at present confined to three well-known agents, nitrous oxide gas, ether and chloroform. We will consider also some mechanical mixtures containing one or more of these most important agents. First, then,let us consider the question of safety to the patient, and, secondly, classify the cases, the nature of which influences our selection. Nitrous oxide, admittedly the safest of all general anæsthetics, unfortunately, seems to have been relegated to the domain of the dental surgeon. Its greatest drawback has been that it is inapplicable for prolonged administrations, though Paterson of St. Bartholomew's Hospital, Bennett of New York, and others of late have been successful in maintaining a satisfactory anæthesia for from ten to twenty minutes with occasional breaths of air, and the first named has administered N_2O with O, for periods varying from fifteen to sixty-five minutes. The former disadvantage of a cumbersome apparatus has now been removed by the manufacture of small containers which are quite portable. It is most rapid in its action, requires but little skill in its administration and is given with practically no risk to life. If in addition to the nitrous oxide, sufficient O is given to abolish the asphyxial factor, no risk is incurred, but more skill is required in the administration of this combination than in that for N_2O alone. Thousands of cases have been anæsthetized in this way and no deaths recorded. Next to nitrous oxide, N_2O, will anyone, in the face of our present

* Read before the Toronto Medical Society.

knowledge, deny that ether is safer than chloroform for general surgical purposes? There are those who hold that anæsthetists have vested interests in declaring that anæsthetics should be entrusted to skilled hands and, that ether with a complicated apparatus should take the place of chloroform with its simple method of administration. Surely such an authority as Mr. Jonathan Hutchinson could not be thus impeached. He says: "I have not the slightest misgivings in my belief that the restriction of chloroform would save many lives every year. Never give chloroform alone in the first instance; let it either be preceded by ether, or in mixture with it." There are few among London hospital surgeons of to-day who prefer chloroform to ether, and the anæsthetists, to a man, I may say, use ether for general surgical purposes. Clover gradually discarded chloroform in favor of ether, and in 20,000 cases in which he had given nitrous oxide, ether and ethedene, there had been but one fatality and that with the last named agent. Bailey, Woodhouse-Braine, Buxton, Hewitt, Turnbull, and others prefer ether for general surgical purposes.

Let us now make a comparison between these two most important agents:

ETHER.	CHLOROFORM.
A.—(1) Circulation stimulated. An insufficient dose or an over-dose of the anæsthetic rarely leads to the disturbance of circulation.	(1) Circulation. Depressed. It is difficult to "hit off" the level of anæthesia, an error on the side of insufficient dose, or of over-dose being attended with much danger.
(2) Grave reflex circulatory depression is rare.	(2) Reflex circulatory depression common.
(3) Accidental or emotional conditions do not affect the circulation.	(3) Fear, grief, etc., apt to show their effect upon the circulation when the patient is being anæsthetized.
(4) Syncope rarely accompanies the act of vomiting.	(4) Syncope frequent with vomiting.
(5) The sitting posture attended with no danger.	(5) Sitting posture dangerous.
(6) In poisoning by ether circulation rarely affected.	(6) Fatal phenomena are cardiac.
B.—Respiration.	
(1) Stimulated. Usually free, deep, regular, and breezy, so that the least departure from the depth or regularity at once attracts attention.	(1) Respiration often so shallow and quiet that, although we are told to regard respiration as the chief guide, the danger signal is often hung out so quietly that it escapes immediate notice.
(2) Owing to the strength of the respiratory movements there is not much danger in placing the patient in constrained positions sometimes necessary to the success of the operation or convenient to the operator.	(2) During chloroform anæsthesia great care must be exercised that nothing constricts the chest or abdomen or hampers the breathing in any way. Dastre found that it required weight of seventy-five kilogs placed upon the thorax to cause cessation of respiration in a conscious dog, and only twenty-five kilogs after one hour's chloroformization.

(3) Bronchitis and pneumonia are occasionally set up by the vapor of ether.	(3) Bronchitis and pneumonia rare.
(4) Moderate deprivation of air is somewhat advantageous.	(4) Deprivation of air very dangerous.

C.—URINARY SYSTEM.

Ether is said to produce structural changes in the kidney and albumenuria more frequently than chloroform, while a pre-existing albumenuria is said to be increased more often by chloroform than by ether. The danger of kidney complication after ether has been much over estimated (Hewitt, Turnbull, Buxton, Roux, et. al.).

Ether is practically free from risk in a healthy subject, whereas the majority of deaths from chloroform occur in robust subjects. The safe "charging up" of a patient with an anæsthetic is possible with ether but impossible with chloroform.

HEWITT'S CLASSIFICATION.

1. Tooth extraction.
Removal of the toe or finger nail.
Opening of abcesses, superficial or deep.
Application of the actual cautery.
Passing of sound.
Examination of the painful rectum or vagina.
Scraping patches of lupus and other short operations.

2. Nitrous oxide, followed by ether, are suitable cases for N_2O for all general surgical purposes, including ophthalmic operations, except the following, where chloroform is more applicable and, in some cases, essential:

(1) When actual cautery has to be applied in or about the mouth or face.
(2) In allaying the pains of natural labor.
(Ether being the safest agent in obstetric operations requiring anæsthesia to the full surgical extent.)
(3) For most operations upon the palate, tongue, jaws, mouth, and nasal cavity where the circumstances permit the patient having first been etherized.
(4) Where very large tonsils exist, and in some cases for operations upon the naso-pharynx and pharynx.
(5) In extreme emphysema, chronic bronchitis, with expectoration and dyspnœa.
(6) Advanced pulmonary phthisis.
(7) In cases where dyspnœa exists from narrowing of the upper air passages (Any anæsthetic dangerous.)
(8) In operations about the region of the neck.
(9) In cerebral surgery.
(10) Cases where ether or mixture is badly borne.

3. The *A.C.E.* is usually better borne than ether or chloroform—
(1) In cases of heart disease, with symptoms.
(2) In very old patients whose chests have become rigid.
(3) In extreme obesity.
(4) In certain operations upon the chest wall and pleura.

Of the Schleich solutions containing chloroform, petrolic ether, and sulphuric ether we are as yet unable, through very limited experience, to speak very definitely.

These, solutions, it is said, may be used without fear of producing or increasing pulmonary or venal affections. But the same

care must be exercised in their use as in the case of any other anæsthetic.

Mr. President, I have followed very closely Dr. Fredk. Hewitt's directions in the consideration of this subject, and, although I was convinced many years ago from my own experience of the superiority of ether over chloroform for general surgical purposes, I have him to thank, and I feel the profession and those who are unfortunate enough to require surgical aid also owe him a debt of gratitude for his labor in this important field, and for his having given us an apparatus which is at the same time easy of management, time saving to the operator, and a boon to the patient.

Selected Articles.

THE IMPROVEMENT OF GENERAL ANÆSTHESIA BY ADAPTING THE BOILING-POINT OF THE NARCOTIC TO THE TEMPERATURE OF THE BODY. (SCHLEICH.)*

By Dr. Willy Meyer.

It is fair to assume even now that one out of every two thousand still dies under chloroform anæsthesia, and one out of ten thousand under ether anæsthesia. It was this uncertainty regarding general anæsthesia that had led many surgeons to strive to perfect cocaine or other local anæsthesia. Dr. C. L. Schleich, of Berlin, reasoning from experiments on animals, was of the opinion that the absorption of a general anæsthetic is dependent on (1) the surrounding temperature, and (2) the boiling-point or maximum of evaporation of the anæsthetic.

THE PHYSICS OF ETHER AND CHLOROFORM NARCOSIS.

If a person inhales an anæsthetic having its point of maximum evaporation at 59° F., less will be introduced into the blood than if the anæsthetic has a maximum evaporation of 149° F.—*e.g.*, chloroform. If the maximum evaporation of the narcotic approaches the temperature of the body the lungs alone are capable of regulating the elimination, so that exactly as much is exhaled during expiration as was inhaled during inspiration. This explains the fact that deep narcosis cannot be produced if the maximum of evaporation of the narcotic and the temperature of the body correspond. If, however, the maximum evaporation is 149° F., more of the anæsthetic is absorbed in inspiration than is eliminated in expiration. It must therefore, be eliminated somewhere else—the heart, kidneys and liver must be called into action; and this explains why the after-effects on these organs are so much more pronounced after chloro-

* Read at a meeting of the Medical Society of the County of New York.

form than after ether. Sulphuric ether having a maximum evaporation of 93° F., at a temperature of 100.4° F., it must expand and distend the pulmonary alveoli. It is this obstruction to respiration which causes a certain degree of cyanosis. Another result is the secretion of mucus and the frequent occurrence of secondary pneumonic infiltration. The pressure of carbonic acid accumulating in the blood partially overcomes the tension of the ether vapor in the alveoli and permits its escape; then the cyanosis disappears and the true ether narcosis begins. It is the slight excess thus remaining in the blood which suffices to affect the brain and produce unconsciousness. Death from ether on the operating-table, therefore, is almost impossible as long as respiration is efficient. On the other hand, it is evident why ether narcosis sometimes has such deleterious effects on the lungs. On account of its high boiling-point chloroform is absorbed by the blood to a greater extent than needed, and in leaving the organism overtaxes all of the parenchymatous organs. Ether, on the other hand, is converted into vapor so rapidly when inhaled into the lungs at the temperature of 100° F., that it would not enter there at all if the alveoli did not first become overfilled with carbonic-acid gas. From the foregoing considerations it is evident that a safe narcotic would be one in which the amount eliminated during expiration would almost equal that absorbed during the previous inspiration.

WHY MIXTURES ARE SAFER.

It was in this definite and really scientific manner that Schleich started his experiments. In Vienna a mixture of one part chloroform and six parts of ether had been used so extensively as to be known as the "Vienna mixture." It remained for Schleich to show the reason for the greater safety of this and other so-called "mixtures," viz., the lowering of the maximum evaporation more than twenty-seven degrees. Thus the point of maximum evaporation of the A.C.E. mixture is about 119° F.—certainly a good deal nearer the temperature of the body than the point of maximum evaporation of chloroform. This lowering had been almost unconsciously and certainly not deliberately done. No one before Schleich had ever stated the reason for the greater safety of such mixtures. It was important to note in this connection that the term "mixture" is inaccurate, and that we should speak of Schleich's "solutions."

SCHLEICH'S RESULTS.

The chief features of Schleich's work are as follows; (1) Our familiar anæsthetics, ether and chloroform, were mixed with a ben-

zin; (2) it was found that by so mixing various ethereal substances the resulting fluid was a true solution in a chemical sense, and not a mere mixture of different ethereal substances; (3) it was ascertained that by changing the proportion of the components one could change the maximum evaporation at will, and so, in a given case, adapt the maximum evaporation of the anæsthetic to the temperature of the patient at the time; (4) these effects were found to hold good, and were verified in cold-blooded as well as in warm-blooded animals; (5) the result is the same whether the anæsthetic was inhaled, given by rectum, or injected subcutaneously; and (6) the result was exactly the same in the human subject as in the lower animals.

SCHLEICH'S SOLUTIONS.

Schleich recommended three different solutions, made up by volume and not by weight. Solution No. 1 is composed of chloroform, 1½ oz.; petroleum ether, ½ oz.; sulphuric ether, 6 oz. Solution No. 2 is composed of chloroform, 1½ oz.; petroleum ether, ½ oz.; and sulphuric ether, 5 oz. Solution No. 3 is composed of chloroform, 1 oz.; petroleum ether, ½ oz.; and sulphuric ether, 2⅔ oz.

AUTHOR'S CONCLUSIONS.

Dr. Meyer said that his conclusions, as formulated in this paper, were based on one hundred cases of general anæsthesia observed by him since the middle of last September. They are as follows: Excitement is very rare during the induction of the anæsthesia, and not marked at any time. There is rarely accumulation of mucus, never cyanosis. During the stage of anæsthesia, in spite of the fact that the solution contains sixty to eighty per cent. of sulphuric ether, there is no accumulation of mucus and cyanosis is rare. During this stage the pulse is full and regular, sometimes fuller than before. The respirations are not impaired so long as the narcotizer attends to his work. The type of the respiration is the direct index of the patient's condition. When the respirations become deep and frequent, it indicates the approach of the danger limit. After the anæsthetic is withdrawn the patients awaken more rapidly than after chloroform or ether. More than one-half of Schleich's patients walked home one hour after being anæsthetized. Vomiting occurs, but less often than after other narcotics; it had occurred in 44 per cent. of his cases. In not a single case was there consecutive bronchitis or pneumonia, although gastrostomy was done on two very wretched persons with very fetid bronchitis. These patients stood

the operation remarkably well and the bronchitis was not increased. Albumenuria was found in only 4 per cent.—a distinct improvement on former experience. A few patients had disliked the odor of the solutions. When administered by artificial light the formation of chlorine gas was very noticeable, and made the attendants cough. This anæsthetic is best administered on one of Esmarch's masks, which has been covered with oil silk and to which a small funnel has been attached. Dr. Meyer thought there could be no doubt that these solutions would soon take the place of chloroform and ether, and that a great boon would be conferred upon suffering humanity through the aid of medical science.

Dr. Meyer, in closing the discussion, said that on corresponding with a number of wholesale chemists he had been astonished at the great difference of opinion existing among them regarding the properties of the petroleum ether, and particularly as to its boiling-point. It was not improbable that other anæsthetic mixtures would be discovered possessing the requisite maximum of evaporation, but the advantage of Schleich's solution was that only one new agent, petrolic ether, was introduced, the other components being familiar anæsthetics. Regarding the quantity used, the speaker said it depended very largely upon the kind of mask and the solution. The effect of solution No. 1 was much more transient than that of Nos. 2 and 3; hence for operations about the face one should always use No. 3. For such operations it would be difficult to keep the patient anæsthetized with No. 1.

MODE OF ADMINISTRATION.

He believed that a mask which did not allow free evaporation was the best. As little as possible of the anæsthetic should be given; with the ordinary towel cone the quantity administered could not be estimated. Esmarch's mask covered with flannel and then with oil silk constituted the best arrangement, and it was convenient to have it provided with a funnel into which the anæsthetic agent could be dropped. The usual rule in administering chloroform was to give one drop about every five seconds; in the new method a drop should be allowed to fall on the mask about every second—in other words, it should be continuously dropped upon the mask. On an average he had used six or eight ounces of the anæsthetic for an operation lasting from forty-five minutes to two hours. The occasional cyanosis that had been observed did not seem to be fairly attributable to the anæsthetic itself. The respiration must be carefully watched, and if the breathing become rapid

and deep the administration of the anæsthetic must be suspended and more air given. The whole narcosis was very similar to that of chloroform. The principal difference noticed so far was that, in from six hundred to one thousand administrations, in not a single instance had the patient been in a dangerous condition at any moment. In his own experience in only 4 per cent. of the cases had there been even slight albumenuria. Not a single death had been reported yet from the use of this anæsthetic.—*The Medical Record.*

[While we welcome the introduction of Schleich's solutions as being a distinct gain over the American open method of etherizing, it will require much more experience with the first named to convince us that it is superior to the English method (*e.g.* Hewitt's) of anæsthetizing with gas followed by ether in a closed inhaler for general surgical purposes.

Safety to the patient is the first consideration, and if time and experience should prove the Schleich method safest in all cases and in all hands, skilled and unskilled, then must we adopt it as the general anæsthetic.

But there are other considerations. The method of Hewitt is most rapid—the patient losing consciousness quickly, and without noticing the odor of the ether: much time is saved the operator, and if a proper level of anæsthesia is maintained consciousness returns as soon as when the No. 3 Schleich has been used. If there is a transient albuminuria, say in four per cent. of the cases set up by the use of the Schleich we cannot say that we are sure that no case of urinary suppression will occur.

The cases of albumenuria athough more numerous (seven per cent. in our own recorded cases) are transient following the Hewitt method of etherizing.

Perhaps further experience will lead us to alter our present conclusion which is that no one anæsthetic should be used to the exclusion of others, be they separate or in combination, and the safety of the patient lies largely in the judicious selection of the anæsthetic for the particular case.—H. C. S.]

Clinical Notes.

TWO CASES OF DIABETES, FOLLOWED BY COMPLETE CURE.*

By Prof. Pietro Lupo,
Naples.

I HAVE been induced to publish these two cases only for the confirmation of two facts, without any scientific pretext, so much the more as I practise surgery, and not medicine, and my studies are therefore directed more to the former.

Two years ago I was called to a certain woman named Pipolo, who had on her back an enormous honeycomb-like growth. I learnt that she, about eight months before, had had a similar growth, almost in the same place, but a little higher, towards the right shoulder. In this position was seen an extended scar, very unsightly, showing that there had been great destruction of the tissues and also slow repair.

The present growth was enormous, extending right across the back, from below the scapula to the first lumbar vertebra. I followed my usual procedure in such affections, incising the growth in several places, scraping the bottom and walls to remove the necrosed fragments, and after an abundant lavage with sublimate solution, filling the cavity with iodoform. The necrotic process was at once arrested. However, I perceived that the cleansing of the cavity, as also the process of repair, were progressing very slowly.

Owing to this fact and also to the occurrence of two such growths on the same person within so brief a period, I suspected diabetes, and on examining the urine found a large percentage of sugar.

I now directed my attention more to the constitutional derangement, and prescribed a vigorous dietary in the way I shall afterwards describe. To-day Pipolo is in perfect health. There was no sugar in the urine from the tenth day after she began the restricted diet.

*Translated from the Giornale Internazional delle Scienze Mediche by Dr. Harley Smith.

A man named Pardo had been suffering for more than a year from digestive disturbances, malaise, fatigue, pain in the limbs, bronchial catarrh. He passed abundant urine, had various visual disturbances, had grown so thin as to seem a skeleton. The analysis of urine showed a large percentage of sugar. He was put on an exclusively meat diet, and in twenty days the sugar disappeared from the urine, but the other symptoms, which were torturing the patient so much, did not disappear. He resumed the mixed diet, giving preference to meat, and the sugar reappeared, soon amounting to the former proportion, and the symptoms increased in intensity. His strength was so diminished that he could not rise from bed; he digested very poorly, suffered a general malaise; the visual disturbances were increased to such a degree that at times he was blind for some minutes; on the anterior surface of both tibial regions gangrene of the skin set in.

In this state of the patient, I was called in May last more to cure the trouble in the legs than for anything else. In this case too, I prescribed the special diet, which gave me such a good result in the case of Pipolo, without any medicine whatever.

After eighteen days, Pardo was able not only to leave his bed but to walk to my office. The gangrene was arrested. The analysis of urine, made by Professor Primavera, showed complete absence of sugar and albumen. All the other symptoms have gradually disappeared (the gastric condition was the first to improve), and a few days ago Pardo came to my house, improved in nutrition and told me that he felt perfectly well; there remained, however, some intestinal torpor.

For two years I have been persuaded that uric acid diathesis, diabetes, oxaluria, etc., are different phases of one single morbific entity, and since I knew of no single case truly cured on the meat diet, and since I had experienced in myself the very beneficial effects of a diet exclusively vegetable, banishing wine absolutely and rendering the blood very alkaline—in myself who used to suffer in a dreadful manner, so as to almost make me attempt suicide—I made bold, by way of experiment, to prescribe the same diet, exclusively vegetable, for Pipolo, and saw in this patient too, the beneficial results of such a dietary. With greater hope of success I ordered Pardo to take the same diet and in him the effects have been truly marvellous. In the vegetable dietary I excluded nothing; all edible soups, peas, beans, saccharine fruits, including the grape. I allowed everything, and the results have been as above.

In Pardo's case it was noticed that after two months of the vege-

table diet the analysis of the urine showed not only a complete absence of sugar, but the presence of many crystals of oxalate of lime, from 60 to 70 for each field under the microscope. It might seem that this was owing to the vegetable diet, especially as they had not been noticed when the urine was diabetic. And so one might fear that the patient had only changed his diabetic condition for an oxaluric one, and we would then not know how to feed him, as the exclusively meat diet and the mixed diet had done no good. But I, firmly convinced, instructed the patient to continue the vegetable diet, and the result has been that the oxalate of lime, too, has disappeared from the urine.

One certainly cannot draw decisive inferences from these two cases, especially as the etiology of diabetes is multiple; but we can, I think, conclude that many diabetics can be cured on the vegetable diet. I have under my care at present a case in which the analysis of urine shows more than 100 crystals of oxalate of lime for each field under the microscope. This patient is improving on the vegetable diet.

At present it suffices to narrate two clinical cases in which the vegetable dietary has given splendid results.

A FATAL CASE OF THYROIDECTOMY.

ABSTRACT.]

A case resulting fatally after operation for partial removal of the thyroid forms the basis of an extremely interesting report on the subject of post-operation symptoms in connection with the thyroid gland, by Paul, of Liverpool (*British Medical Journal*, January 1, 1898). Many of these symptoms were due, the author believes, not to the wound, but to disturbance of the gland. The following is a brief report of the case. The patient was a girl, æt. fifteen years, with rather large goitre. On December 3 the isthmus and one lobe of the thyroid were removed. Operation was an entire success. During the night she became restless and uneasy; irritable cough with a mucous rattle in the throat. The temperature was 100°, the pulse 130, and the respirations 26 and labored. On the morning of December 4 the same condition was present; the wound was dressed, and appeared perfectly healthy. In the afternoon the temperature rose to 103°, and fearing that the ether inhalation had set up bronchitis, steam and eucalyptus vapor were used, with stimulants and extra nourishment. Subsequently the restlessness, anxiety, distressed breathing, and frequency of the pulse increased, and the temperature was generally between 101° and 102° F. There was no further evidence of bronchitis. She took nourishment and stimulants well, but notwithstanding the most devoted care on the part of my house-surgeon, Dr. Badger, and the sister of the ward, the Graves' disease-like symptoms increased in severity, and the pulse became uncountable, and she died on December 6, just two and a half days after the operation. Small doses of morphine were given a few times, and on each occasion were followed by a little sleep. Probably, as observed by Dr. Rodocanachi, it would have been better to have used this drug more freely. A necropsy was made. In regard to the wound, there was a want of healing action, and the fluid contained in it was of a very watery character, but there was nothing suggestive of septic changes. The divided surface of the thyroid looked quite fresh, as though repair had not yet commenced. The cases of the lungs were congested, and there was a little tenacious mucus in some of the tubes, but no general bronchitis. The

heart and all the other internal organs were healthy, except the liver, which was very fatty and perfectly nodular throughout from idiopathic cirrhosis. At first I thought this remarkable liver might be sufficient to account for the death of the patient, but soon dismissed the idea, for on viewing the whole circumstances I could come to no other conclusion than that the symptoms were due to the absorption of an excessive amount of thyroid secretion, but how it came about, and what I could do to prevent it, did not then occur to me.

In a subsequent case the same symptoms were present and the condition was relieved by packing the wound with gauze, which absorbed the watery secretion. The danger might be altogether averted by ligature of the severed isthmus and by avoiding undue handling of the gland.

Progress of Medicine.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

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AND

H. T. MACHELL, M.D.,

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ASSISTED BY

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Physician to Victoria Hospital for Sick Children and St. John's Hospital.

Prevention of Puerperal Sepsis.

In private practice preventing the nurse from making vaginal examinations would do more to diminish puerperal fever than anything else. (Jno. Campbell, Ulster.)

The Early Symptoms of Puerperal Infection.

Ferré (*L'Obstetrique*, ii., No. 5, p. 425, September 15th, 1897) points out that the general notion of the sudden onset of marked symptoms of puerperal infection after a longer and shorter period of silent incubation is inexact. Even in the period of incubation important, although attenuated, symptoms may be present, and their recognition will greatly conduce to successful treatment. These early symptoms are: slight elevations of temperature occurring once (or twice) daily, and usually in the evening; a pulse rate of 80 or more, especially if in the morning, when the temperature is not yet raised; relative or absolute insomnia, which is a very important indication of serious infection, and requires careful inquiry; headache, at first intermittent and slight, usually always in association with the other symptoms mentioned; sometimes diminution or suppression of the lochial discharge, although as a rule this is a later manifestation; and, finally, vague impressions of cold, but not usually a distinct rigor. The later symptoms, such as marked rigors, high tempera

ture, local pain, etc., are well known; it is to the recognition of the early symptoms that we must trust for the successful treatment of such cases.—*British Medical Journal Epitome.*

The Administration of Phosphate of Strichnia During Gestation.

Dorsett, of St. Louis, believes that constipation and its consequent ptomaine poisoning, as is evidenced by langour, dizziness, and general malaise, is probably (aside from kidney lesions) one of the most serious conditions with which the physician has to deal. As soon as the usual physiological engorgement of the uterus begins, blood is diverted from the intestinal tract as well as from the general economy to the uterus. The nervous energies are also directed towards this organ from the general system, and, as a consequence, an atomic condition follows, which may end in a disordered and demoralized nervous system. For the relief of this deranged nervous system he tried phosphorous, the well-known nervous tonic, in connection with strychnine, the one-hundredth of a grain of each. In regard to the use of phosphate strychnine during pregnancy, he has found that these patients have a good appetite and good assimilation; constipation is relieved, the patient is built up, the uterus contracts well after labor, and the use of ergot is entirely dispensed with.—*Am. Jour. Obs.*

Excessive Mobility of the Uterus.

The symptoms of excessive mobility of the uterus are readily explained by irritation of the hypogastric plexus of the sympathetic, just as those of movable kidney are due to irritation of the solar plexus. (G. M. Edebohls, New York.)

The Elimination of Toxins in Eclampsia.

In regard to eclampsia Barrè, of Paris, not only makes transfusion of salt solution, but performs venesection as well at the same time. This is done to lessen the toxins in the blood, in septic conditions, in anæmic convulsions, in scarlatina, etc. He holds that in the elimination of poisons from the system by the kidneys, venesection stands second in importance. (A. H. Ferguson, Chicago.)

The Prevention of Vesico-Vaginal Fistulæ.

When the child's head in the pelvis ceases to recede after a pain, the forceps should be immediately applied. (Thomas Addis Emmett.)

Obstetrics Versus Gynæcology.

The more obstetrics advances the narrower becomes the sphere of the gynæcologist, and it may well be said that the obstetrician of the future will be the best gynæcologist, for he will practise the latter specialty by prophylaxis.—Editorial in *Am. Gyn. and Obs. Jour.*

Lymphatic Puerperal Sepsis.

When the day comes when we can feel sure, after the initial chill we will say, that the woman has that type of sepsis which is quickly disseminated throughout the system (the lymphatic variety), then early and radical extirpation of the pelvic organs, uterus, tuber, and ovaries, will give us a fair chance of saving these patients. (Egbert H. Grandin, New York.)

A Pint of Saline Solution Hourly.

It is remarkable how much salt water the colon will absorb, and that quickly, almost greedily. In a primipara in collapse after labor, one pint of a saline solution was injected hourly for twenty-our hours, all being absorbed, and the patient quickly rallied. (S. Marx, New York.)

Accouchement Forcee.

His results have been quite favorable towards emptying the uterus in eclampsia. He finds that the mortality has decreased one-half during the last four or five years, since he has resorted to the method of rapid delivery. (Prof. Zweifel, Leipzic.)

The Use of the Hand in Obstetrics.

It will be objected that the danger of introducing septic germ with the hand is such as to off-set any probable good to come of such uterine manipulations. To this we simply say that the operator who is unwilling or unable to sufficiently sterilize his hand for obstetric operations is unfit to be trusted at the other end of an instrument of steel—boil he it never so wisely! (Malcolm McLean, New York.)

Dilate Cervix Thoroughly Before Extracting.

When the cervix is obliterated and practically continuous with the vagina, the os should be given a few minutes of firm dilatation over a period of about three minutes. Many times version is

accomplished, and the child extracted through a rigid os, and the result is that the mother is subjected to a great deal of laceration, to say nothing of the loss of the child's life. (J. Clifton Edgar, New York.)

Professional Responsibilities in Obstetrical and Gynæcological Cases.

For his own protection, about which the law thinks nothing, the general practitioner at least should never induce premature labor without consultation, that in all cases of suspected criminal abortion he should safeguard himself by calling in as early as possible another independent medical witness, and that never under any circumstances whatever should he be induced to examine a woman without her full consent, and preferably in the presence of witnesses. (Alex. Ballantyne, President Edinburgh Obs. Socy.)

PÆDIATRICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.CP., Lond.,

Lecturer on Clinical Medicine and Diseases of Children, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College

AND

W. J. GREIG, B.A., M.D.

Etiology of Chorea.

The causation of chorea is described by Legay (Thèse de Paris 1897.) From statistics it would appear that the disease occurs in those of neurotic heredity, who have recently suffered from infection of some kind. This infection is, in the majority of cases, rheumatism, but there are many instances of chorea arising from other conditions, more particularly various specific diseases, such as measels, with or without broncho-pneumonia, scarlet fever, typhoid, influenzic bronchitis, tuberculosis, and varicella, even boils with marked glandular enlargement, impetiginous eruptions on the head, and suppurative otitis. All these seem capable of producing chorea.

Varicellous Laryngitis.

Laryngitis is a complication of varicella as described by Harley (*Journal de Med.*, June 25th, 1897) and cases of his own are re . In all instances the symptoms were those of croup, and, in fact, such was the original diagnosis of each case; raucous cough, loss of voice, retraction, dyspnœa, suffocative spasms, and asphyxia were constantly present, but in none of these cases was there the least appearance of membrane, and no Loeffler bacilli were ever found. The specific character of the disease was very clear, there being small circular ulcerations on the vocal chords, and often on the epiglottis. The author points out that this complication is more especially met with in children, particularly those of weak constitution, and the younger the child the worse the prognosis. The character of the eruption also bears upon the prognosis, for in one case which recovered the eruption was discrete, while in some

of the others it was of the hæmorrhagic variety, and in one instance confluent. In the only case of recovery which came under the author's observation had there been resort to tracheotomy. In all the others death was due to either spasm of the glottis or bronchopneumonia.

Spontaneous Straightening of Rickety Curvatures of the Leg.

From a study of a large number of cases at the Tubingen Clinic Kambe (*Bruns. Beitr. Z. Klin. Chu.*) concludes: (1) The greater number of all cases of rickety curvatures of the legs undergo spontaneous cure. Of the author's cases, all severe, seventy-five per cent. were cured, 15.3 per cent. improved, in only 9.7 per cent. was there no improvement of the deformity. (2) The process of spontaneous straightening lasts usually from two to four years. If the curvatures began in the first or second year of life the legs are quite straight by the fourth or fifth. (3) If the curvatures are unchanged by the sixth year spontaneous cure does not take place at all. There are always cases of most severe general rhachitis. (4) The chief aim in treatment is to improve the general health so as to strengthen the muscles. In Kampe's experience, as soon as the disease is past the acute stage, being about on the legs is not detrimental, but, on the contrary, helps the cure. Orthopædic treatment by plaster-of-paris, splints, etc., is not necessary. Osteotomy is indicated only when the curvatures persist after the sixth year.

Intubation Before and Since the Use of Antitoxin.

From his experience of a large number of cases of intubation composing a series done prior to the use of antitoxin, and a second series where intubation was done in conjunction with injection of antitoxic serum, T. H. Halsted arrives at the following conclusions: (New York *Medical Journal*, 1897, Vol. lxv., No. 24):

(1) Laryngeal diphtheria, in any epidemic, is never mild, but has always had a mortality of from ninety to ninety-five per cent., reduced by operation, intubation or tracheotomy, to from seventy-two to seventy-six per cent.

(2) The report of his cases shows a mortality of intubations without serum of seventy-six per cent.; in conjunction with serum of twenty-five per cent., and, eliminating cases of death within twenty-four hours of injection, a mortality of ten per cent. The reduction of mortality from seventy-six to ten per cent. is to be credited to antitoxin.

(3) Antitoxin should always be administered as early as possible, and in laryngeal cases without waiting for the bacteriologist's report. If this is done it will usually prevent an extension to the larynx, or, if the larnyx is already invaded, an early injection will frequently cure without need of operation.

(4) No child should be allowed to die of laryngeal stenosis without an operation, preferably intubation, and serum should be injected at once, regardless of the stage of the disease, as most desperate cases often end in recovery.

Fifteen Consecutive Cases of Intussusception.

The proceeding of the London Clinical Society (British Med., Dec. 18, 1897), contains a report of fifteen cases of intussusception by Mr. Barker. Certain conclusions arrived at from observation of these cases were brought forward by him. The condition if not early relieved tended to promptly fatal termination. It was, however, impossible to ascertain with certainty in any given case whether the critical point had been reached. Experience had, however, shown that within thirty hours a hopeless condition of strangulation might be reached; while in other cases the bowel might remain viable for many days. The views of individual practitioners would vary according as they happened to have met with most of one or the other class of cases. It would be just as wrong to say that laparotomy was the only treatment for acute intussusception as to urge that injection was suitable for all cases. Some yielded readily to injection, while others were not and could not be amenable to such treatment. When the invagination commenced in the small intestine, above the ileo-cæcal valve, it was evident that it could not be reached by distension of the bowel from below. Leichtenstein's statistics showed about 30 per cent. of enteric intussusceptions and eight per cent. of ileo-colic, so that 38 per cent. of all intussusceptions were essentially unsuitable for treatment by distension. Of the remaining 62 per cent., including 44 per cent. ileo-cæcal and 18 per cent. of colic, though theoretically amenable to the distension treatment, as a matter of fact a very large proportion were not brought until œdema and firm strangulation had rendered the walls of the bowel quite unyielding. Then, too, the invagination sometimes apparently yielded to injection, and the bowel uncoiled itself up to the point where invagination began, but no further. Consequently, when the distending force was withdrawn, the invagination resumed; in fact, there had not been

perfect reduction. In such cases they must be on the lookout for a return of the tumor, even before a return of the symptoms, and, in such event, it behoved them to operate at once. In his 15 cases of acute intussusception, this apparent reduction was illustrated in five, in four of which he had afterwards to do laparotomy. Injection failed absolutely in three other cases, in addition to the above. It was plain, therefore, that of these fifteen cases, injection failed in eight; but subsequent events showed that of the fifteen, no fewer than twelve could not possibly have been reduced by injection when first seen, so that only one in five of the whole series had the slightest chance of being relieved by injection. Considering that there were 38 per cent. of ileo-colic and enteric intussusceptions not amenable to injection, and in view of the fact that eight out of fifteen treated by injection proved failures, the chance of success by this method of treatment would seem to be small indeed. He concluded, therefore, that except in the rare instances in which they saw the patient within a few hours of the onset of the symptoms, it was safest not to employ injections, but to proceed at once to abdominal section.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF

PRICE-BROWN, M.D.,

Laryngologist to Western Hospital; Laryngologist to Protestant Orphans' Home.

Guaiacol as a Local Anæsthetic.

Newcomb (*Laryngoscope*, June), in a paper read before the American Laryngological Association, describes the use of this drug in certain cases as a substitute for cocaine. He says that it has been used in 98 cases with gratifying success. It is prepared by adding 5 per cent. of guaiacol to a solution of sulphate of zinc in olive oil and alcohol.

Bactericidal Properties of Nasal Mucus.

Jonathan Wright (*Laryngoscope*, June), after careful investiga tion, has arrived at the conclusion, that the prevalent idea among rhinologists, that the nasal macus is bactericidal, is incorrect. In a number of experiments, it was found to have no effect upon the Klebs Loeffler bacillus, the streptococcus and the staphylococcus. On the other hand, the mucus did not contain as many germs as was supposed.

Turbinatomy as Applied to the Inferior Turbinated Body.

Dundas Grant (*Jour. Lar.*) opened a discussion upon this subject before the London Laryngological Society, and advised in appropriate cases the removal of all or part of the inferior turbinated. The operation may be performed either by Jones' spokeshave, or by Greenwald's "typical" method. In the latter, a notch is cut in the neck of the turbinal, and the piece removed by hot or cold snare. This treatment is only applicable to cases, where sufficient breathing space, through the inferior meatus, cannot be otherwise obtained.

St. Clair Thompson uttered a word of warning with regard to baneful effects that might accrue; and quoted Frudenthal of New York, who had seen cases come for relief from the atrophic condition produced by operations of this nature.

Voice after Removal of Adenoids.

Dr. Gibb (*Philadelphia Polyclinic*, June, 1897) gives a guarded prognosis in reference to character and quality of voice after removal of adenoids from the vault, or excision of hypertrophic tonsils. This applies particularly to children over ten years of age. Sometimes we are disappointed at the non-return of the normal voice. The chief fault lies, he believes, in the changes which may have occurred in the turbinateds and high arched palate, produced by the prolonged mouth breathing, and which the naso-pharyngeal operations cannot remove.

Throat Lesions Produced by Typhoid Fever.

Dr. Tresilian (*British Medical Journal*, November, 1897) communicated to the British Laryngological Association the notes of four cases of enteric fever, exhibiting throat-lesions. This occurred out of a total of eight consecutive cases of fever, occurring in the course of the previous two months. This is a remarkable record, but the report is too brief, up to the present time, to enter into it more fully.

Diphtheria—Impossibility of Immunization Through the Alimentary Canal.

Escherich (*Wein. Klin. Woch.*, 1889, No. 36), in treating upon this subject, says that the most favorable reports of the curative action of diphtheria anti-toxin leave a mortality of ten per cent. With the hope of obtaining better results, he made a series of experiments to ascertain if it were not possible to establish prophylaxis by internal medication. This is in line with Behring's idea, that if diphtheria is to be stamped out, it must be by prophylactic measures.

The author's first series of experiments consisted in drawing blood from a healthy child, which had a short time previously received a subcutaneous injection of anti-toxin, and injecting its serum mixed with various amounts of diphtheria toxins into guinea pigs. It was found that these survived while the control animals succumbed. The second series were treated precisely in the same manner, with the exception that the anti-toxin was administered by the stomach, and not subcutaneously. In this series, the experimental animals as well as the control animals died.

From these, and another series of experiments founded upon them, he concludes that the anti-toxin taken internally is so changed,

or destroyed in its passage through the liver, as to prevent its entrance into the general circulation, thus putting an end to any prophylatic action it might possess.

Treatment of Nasal Deformities.

Prof. Annandale (*Brit. Med. Jour.*, Dec. 4, 1897) gives some valuable suggestions for the relief of deformities resulting from old standing injury or disease. He has used the method proposed in a number of instances during the last fifteen years with good results. It is done on the principle of "slinging" the depressed nasal tissues, whether bony or otherwise, up in their natural position.

The appliances used consist of, 1st, a piece of sheet lead, formed into an arch, with a ledge on each side to rest upon each cheek. The arch should be slightly higher than the nasal bones when in their normal position. On each side of the arch, opposite the bridge of the nose, a slit is made from the cheek ledge up toward the summit of the arch. 2nd, a steel pin nearly two inches long—with a point at one end and a cap at the other—the whole central part being a screw with a nut to be applied from the point.

To raise the depressed nose, the pin is passed deeply through the nose from side to side, opposite the bridge or more depressed portion. The nose is then lifted gently up by means of the pin, and the leaden arch slipped over it, the two ends projecting out through the notches. The nut is next screwed on to give latera support and firmness, and silver wire passed in figure of eight round the ends of the needle and over the arch to put slight traction on the raised tissues. A cap is also fitted to the needle point to prevent injury to the cheek. The apparatus requires to be carefully watched to secure good results. The time required for treatment varies, the object being to retain the apparatus until the tissues have become solidified and accustomed to their new position.

Prof. Annandale also reports a case in which the nose had been completely destroyed, detailing the method by which he relieved the patient. The man had been a sufferer from rodent ulcer. As the cheeks were full of cicatrices from previous operations, no tissue could be obtained there. Two rectangular flaps were made to fill up the gap. One of them was taken from the root of the nose up into the forehead, the incisions being parallel, the base upwards and not cut. The other from the upper lip, base downwards and not cut, the incisions parallel as in the upper flap. They were both dissected off from behind except at their bases, thus ensuring arterial support. The lateral margins of the gap

being pared, the flaps were drawn together and sutured all round. After union had taken place, a second operation was performed. The margins of the lips were cut through, and the sides brought together as in operation for hare-lip. The treatment was successful; but the lower flap being taken from the hairy lip had the effect of an extension of beard upwards into the middle of the face. Still it covered up the chasm, and was much preferable to an open gap.

The Texas Screw-Worm.

M. A. Goldstein (*Laryngoscope*, December, 1897,) gives a comprehensive account of this insect, with the deposit of the ova of the fly within the nasal cavities, and the future development of the larva or grub. The Texas screw-worm fly, the *Compsomyia Macellaria*, seems to have had its origin in Texas, and thence derived its name. Prof. Williston, of Yale, says that it now prevails everywhere from Canada to Patagonia.

Although this pest usually confines its ravages to cattle, yet sometimes it invades the nasal mucous membrane of human beings, and several deaths have been recorded from its effects. The ear also may become the seat of attack. In all the known instances, however, in which the eggs of the screw-worm have been deposited either in the nose or ear, there has been pre-existing foul odor, either from ozæna or otorrhœa. The fly deposits its eggs upon decaying animal or vegetable matter. The maggot thrives on this substance, and the fly feeds on it voraciously.

The symptoms are those of irritation, excruciating pains, and crawling of the newly-developed worms. With these symptoms there is intense inflammation and swelling. The eggs and maggots can be removed from the nose by curette, forceps, etc. They are very tenacious of life, and stick to the walls of the passages with great tenacity.

The fully matured larva is three-fourths of an inch long and one-eighth in thickness. The body is creamy white and made up of segments, while between the segments are rings of bristles, which cause the maggot to resemble a screw, hence the name.

From the larva the chrysalis is formed, and from it the fly.

The larva is very tenacious of life. It is said that it will live for several minutes in pure carbolic acid.

The best treatment is to curette and pick them out. The vapor of chloroform, if concentrated, will kill them; but care would be

required in its use. Ordinary sprays, washes, etc., are of little avail. Rigid watchfulness, with oft-repeated removals by reflected light, appears to be the best treatment.

Scheppegrell, in this month's issue of the *Laryngoscope*, advises the use of warm oil. He says it destroys the larvæ by occluding their respiratory organs. He places the patient in the horizontal position, and fills the nostrils with the fluid—olive oil, albolene, glycol, etc.. etc.

Frontal Headache Due to the Presence of Disease of the Accessory Cavities.

Dundas Grant (*Jour. Laryn.* December, 1897), showed three cases at the last meeting of the Brit. Laryn. Rhin. and Otol. Assoc., in which serious frontal headache was due to sinus disease. Case 1, from frontal sinus disease on left side, accompanied by discharge from left nostril. Case 2, from left sphenoidal disease with left polypoid growth and discharge. Pain continuous and extremely severe. Case 3, from right antral disease with discharge. Careful examination in each case made the diagnosis certain. In each case successful treatment of the sinus disease was followed by relief from pain.

Primary Ulcer of the Tonsils.

L. Jullien (*Annales de Dermat.*, Vol. III., p. 275), relates a rare case of bilateral chancre of the tonsils in a girl seventeen years of age. The syphilis had been inoculated by sucking the nipples of a parent recently delivered, to prepare them for nursing by the infant. The woman had been contaminated by her husband. Both tonsils were invaded by large ulcerations. Dense and voluminous enlargement of the cervical, axillary and other glands quickly followed.

Endoscopy for Œsophagus and Stomach-Œsophagoscope.

G. Kelling (*Munich Med. Woch.*, August, 1897). The author's instrument consists of a series of short cylinders hinged together to bend backwards and forwards freely. It is so adjusted as to be straightened and held in position when required.

To use it the patient sits on the edge of the table, and the operator stands on a stool beside him. The introduction as described seems complicated, but is said to be as simple as introducing an œsophageal bougie. By its use the œsophagus, and to a slight extent the stomach, can be examined.

Pachydermia Laryngis.

Heryng (*Jour. Laryng*, etc., Dec. 1897), speaking at the International Medical Congress at Moscow, dwelt upon the treatment of the pachydermatous condition. He commenced by saying that it was not always the beautiful pearly white cords that produced the finest tones. Not infrequently this pearly whiteness was caused by layers of thickened epithelium, and the owners of such cords would come to the laryngologist for relief of vocal troubles. On the other hand some of the best singers had red catarrhal looking vocal cords. One of the finest lady soloists he knew of had slightly red cords before singing and very red ones after. Consequently, singers' throats should be cautiously treated, and every pink pair of cords should not be considered as diseased.

When pachydermia conscripta was present, milky white spots would be found projecting from the upper surface or margin of the cord. To remove them he found sprays, inhalations, the application of caustics, etc., useless. The best treatment was to snip them off carefully with appropriate forceps—care being taken always in no way to injure the cord proper. After this he cauterized with nitrate of silver; and enjoined absolute rest of voice until healing was complete. He warned against the use of chromic acid or galvano cautery.

Editorials.

DISTRICT NURSING AND THE MEDICAL PROFESSION.

DISTRICT or parish nursing in the country and rural towns of England has made considerable headway during the last year or two. The *British Medical Journal*, in referring to the matter, offers a few words of advice to certain philanthropic persons, frequently ladies, who control and direct the services of the nurses It goes on to say that the local medical practitioner may be placed in a dilemma because he is not consulted by those who have charge of the nurses. Although he may be, and generally is, desirous of securing the best possible nursing for his poorer patients, he may yet be obliged to ignore the good work that is being done by nurses acting independently of medical advice. The physician can only regard such independent work on the part of any nurse, no matter how well qualified, as a form of irregular practice which he is bound to discountenance. The *Journal* says :

" The difficulty would be at once removed if it were made the rule that the local practitioners were placed on the district nursing committee, and that a nurse should be sent only at the request or with the consent of the medical attendant. We believe that the omission is due to inadvertence, and we draw attention to these matters because we are convinced that by so doing we are furthering the cause of the home nursing of the sick poor, which in a few instances has been hindered by the want of these simple rules."

It may be well for us in Canada at the present time to consider carefully the probable consequences of the education of district nurses who receive a training of between three and four years, as is contemplated in the "new order" which is receiving a certain amount of attention from our citizens at the present time. We have not the slightest doubt that district nursing is good, and ought to be of vast service to the sick poor if properly controlled ; and yet we find, from the evidence of the strongest medical journal in the world, and a journal that is favorable to the system, that a very

grave evil has already appeared in several parts of England through the foolishness of governing boards, who encourage their nurses to act in such a way that they become the rivals, rather than the helpmates, of medical practitioners, and in this way injure the incomes of the latter. The young doctor may well fear the trained nurse who, on her own account, or by the authority of some person or persons on her board of control, will go out and grab a twenty five or fifty cent fee where he should get one or two dollars. But some one on the part of the public may say—the poor person will thus get cheap work, what care we for the young doctor? It happens, however, that while such irregular work is bad for our profession, it is also bad for the public, and no one is the gainer in the long run.

We desire to say in this connection that the "Nursing at Home Mission" of Toronto, which is doing such grand work for the sick poor of the city, is exceedingly careful to allow no such irregular procedures. We believe we may say it does the maximum amount of good with the small resources at its disposal in a way that does not in any sense conflict with the interests of the profession or the public. With such a magnificent charity in our midst we think it will be safer for our generous-minded citizens to carefully examine its methods, and give it assistance rather than perform any doubtful experiments in connection with a certain nebulous scheme which is considered by many not to be the most practicable which could be devised.

LENGTHENED COURSES FOR NURSES.

WE have already referred to the fact that the authorities of the "Training School for Nurses" in the Toronto General Hospital have extended their course of teaching from two to three years. We learn from the *Nursing World* that at the present time something like a score or more schools have adopted the three years' course, although at the beginning of the year 1895 there was only one such school in existence. It is expected that before the end of this year all the important schools in the United States and Canada will have adopted the lengthened course.

The *World*, in commenting on this fact, says: "This change in the period of training from two to three years is an important one for the cause of nursing, and there are many reasons why it should be universally adopted. Hospitals in which this change has been effected have observed a marked improvement in the quality of nursing, not only that of the third year nurses, but of the juniors.

as well, the latter profiting greatly from the example of the higher class.

"To the third-course students this last year in the hospital must be of great value. Heretofore many have found that at the end of two years they had just reached a point where they could assimilate well the principles and precepts of nursing. It is more than probable that during the third year of a course of training the student nurses will learn more than in the two preceding years.

"But perhaps the greatest good to be derived from this change will come to the profession of nursing, as a whole, through the elevation of the standard of education, and it is highly important that all schools adopt this feature in their curricula, to the end that there may be greater uniformity in the matter and methods of nurse training."

DOCTORS IN PARLIAMENT.

THE doctor is becoming more and more in evidence as an important factor in Canadian politics. We notice an unusually large number of names of physicians in the list of candidates for the coming election for the Ontario Legislature. In the same connection we desire to express our regrets at the withdrawal from provincial politics of Drs. Baxter and Ryerson. Although these two men were on opposite sides in the game of politics, they were generally recognized as being always on the *same side* when any questions arose which affected the interests of our profession.

There is probably no country in the world where physicians take such an active interest in public matters as in Canada, and probably none where they have so little interest as in Great Britain. The *Practitioner* (English), February, 1898, speaks as follows on this subject:

"Medical men ought, for the benefit of the public as well as for the credit of the profession, to take a much larger part in public affairs than they do. I am glad to note that this opinion has recently been endorsed by a member of the profession who has himself already played a prominent part in the municipal life of London, and who has probably a career of still more extended usefulness before him. Speaking at a dinner given to him not long ago by way of congratulation on his having been elected Chairman of the London County Council, Dr. J. W. Collins pointed out that at the present day, when both imperial legislation and local administration are so largely concerned with the safe-

guarding of the public health and with what Carlyle called 'the condition of the people question,' medical men are, by their training and by the knowledge of the people's needs and difficulties which they gain in the practice of their profession, peculiarly well equipped for public life. Mr. Gladstone said, some twenty years ago, that in the social conditions of the present day there exists 'an opportunity for the medical profession to exercise increased knowledge and a greater share in the leadership of thought.' It is the fault of the profession itself that it has not yet embraced this opportunity to any considerable extent. There is a widespread feeling among doctors that pronounced political feelings of any color may injure their practice. There is a good deal of cowardice and some foolishness in this notion."

THE MEETING OF THE BRITISH MEDICAL ASSOCIATION FOR 1898.

THE sixty-sixth annual meeting of this great Medical Society will be held in Edinburgh, July 26th to 30th, 1898, under the chairmanship of Sir Thomas Grainger Stewart, President-elect. The general meeting will be held in the great McEwan Hall which has recently been erected, and the meetings of sections will take place in the class rooms of the new medical buildings of the University of Edinburgh. The museum of anatomical and pathological specimens will be placed in the dissecting room of the Anatomical Department, and the annual exhibition of instruments, drugs, books, etc., will be held in the large volunteer drill hall situated near the medical buildings.

It is twenty-three years since the Association met in Edinburgh, and so many changes have taken place in this grand old city since 1875 that those who were present at that meeting will find entirely new quarters for all the sections if they be able to attend next July. Edinburgh University is doing great work for medicine, and the world fully recognizes this fact. There is every reason to believe that this meeting will be one of the most interesting and successful medical gatherings that the world has ever known.

THE TRANSPORTATION OF INFECTED BODIES.

THE regulations, which have been in force for some years, regarding the transportation of the bodies of persons dead from infectious diseases, have not been properly carried out. In many

instances they have been apparently ignored, or have been transgressed through incorrect, if not fraudulent, certificates of death. The subject has been considered on several occasions by the Provincial Board of Health, and the secretary of that body, Dr. P. H. Bryce, has devoted considerable attention to the matter.

We understand that he is engaged in working out a scheme for the regulation of the matter, and proposes to divide the province into seventeen districts, and to assign to each of these a properly-qualified officer. These officers are to pass a strict examination before medical experts prior to their appointment, and their duties will be to prepare infectious bodies for burial and to see that a proper system of disinfection is carried out. The probability is that a preference will be given in such appointments to young men who had been trained for a medical career, with a view to their ultimately becoming county medical officers. While Dr. Bryce is giving his earnest attention to the scheme, it is hardly likely to assume practical shape for some time yet, as the Government will be busy for some weeks with the elections. As soon as the campaign is over, however, the subject will be taken up and pressed to a conclusion.

Correspondence.

APPLICATION OF THE PRINCIPLE OF OSMOSIS IN THE TREATMENT OF TOXÆMIA.

To the Editor of THE CANADIAN PRACTITIONER:

SIR,—In the January issue of THE PRACTITIONER I have read with interest Dr. McKeown's paper, bearing the above title. The doctor reports two cases which show marked benefit from the treatment employed. There is no doubt of the efficacy of the saline infusions into the blood current, thereby diluting the blood and lessening the effect of the toxins upon the system.

In the *American Journal of Obstetrics* for June, 1897, Dr. J. G. Clark reports the use of submammary, instead of the radial infusion used formerly by Dr. H. A. Kelly in every case of shock or excessive hæmorrhage.

In a case of puerperal and general infection this treatment was tried as long ago as in Dec., 1895, with gratifying results. The *Medical News* reviewed the work of Claisse and Bosc as follows: (I quote from Dr. Clark) "Take a patient suffering from severe infection—puerperal, for instance; all the organs working badly, the temperature is about 104° Fah.; in ten minutes 1,300 to 1,400 grammes of saline solution are injected subcutaneously. Before half of that amount has been reached the improvement is manifest. The pulse becomes more regular, fuller, and stronger; respiration is deeper and less hurried, and possibly the temperature falls a degree at the end of the injection. The patient feels better, is brighter, and possibly desires to urinate, but not any great amount. Usually the patient now enters what is known as the critical stage, which comes on gradually in four or five minutes, though it may be delayed half an hour. There is a violent chill, with sensations of extreme cold; strong, rapid pulse, and a rapidly rising temperature." Following this the patient goes through a fevered stage, from which she emerges, the temperature falls, and she may have no further trouble."

The *British Medical Journal* of July, 1896, reviews the work done along this line of Duret, Sahli, Maygier, Lizars, Chasserauy, Toffier, and Proben, all of whom have reported cases of septicæmia, surgical shock, and hæmorrhage improve from the use of saline infusion.

The method of injecting strong solutions of sulphate of magnesia into the bowel is not new, for in every case of toxæmia I have been in the habit of using that form of administration, and I believe many practitioners do the same.

I believe the treatment advocated by Dr. McKeown to be a good one, to dilute the blood, and to wash it, so to speak, if he would substitute submammary for the radial infusion. By so doing the dangers are reduced to the minimum, and patient and friends are more easily placated, as consent to cutting is not always obtainable.

In conclusion, I may add that I have used this method twice during the past six months. In the first case the patient aborted at the sixth month from mushroom poisoning, and, after using everything I could think of, Dr. Spence was called in consultation. As a last resort, we tried submammary infusion, but to no purpose; the patient died. She may have been saved had the treatment been used sooner.

The other case was one of collapse from loss of blood in a case of abortion at about four and one-half months, whether criminal or not I could not tell, but when I saw her she was in a bad condition, and I determined to try the treatment. I injected nearly a pint and a half into each breast, and obtained very gratifying results. The method used in each case was that described by Dr. Clark.

Dr. McKeown's treatment can hardly be considered original, in view of the foregoing.

176 Argyle street, Toronto. WALLACE SMUCK.

Meetings of Medical Societies.

PATHOLOGICAL SOCIETY.

The regular meeting of the society was held on Saturday evening, January 29th, Dr. H. B. Anderson in the chair. The following members were present: Drs. Wishart, Peters, Carveth, Machell, F. J. Mackenzie, H. H. Oldright, Wm. Oldright, Primrose, Cameron, Rudolph, Peplar, Starr, Parsons. Visitor—Dr. Graham. The meeting was called to order at 8.45.

The minutes of the previous meeting were taken as read and adopted.

CARCINOMA OF SIGMOID FLEXURE OF THE COLON.

Dr. Peters presented a specimen of the above occurring in a woman. He had performed colotomy, but the patient had died on the third day after operation. The stricture was felt on examination. This growth was nineteen inches above the anus. It is cicotrical in character, probably columnar-celled carcinoma, and in its whole extent involves not more than a half inch of the length of the bowel. The contraction is such as to admit a glass rod about an eighth inch only in diameter. The bowel was dilated above the stricture to about three times its normal size, and was in a state of ulceration and necrosis. As only a partial post-mortem was allowed it was not observed whether or not there were stercoral ulcers of the coccus which is the usual condition. There were numerous enlarged glands in the meso-sigmoid. The liver was not examined.

Dr. McPhedran spoke of the circumscribed character of growths of the sigmoid flexure.

Dr. Anderson—Were there any secondary growths?

Dr. Peters said there was no clinical evidence of such, and only a partial post-mortem examination had been possible, though nineteen inches from the anus, as it was forced down into the pelvis by pressure from above.

VARICOSE VEINS.

A second specimen was of varicose veins removed from the inner side of the left knee and leg. There were two large dilations which

had become thrombosed from a phlebitis. The vein was thrombosed as high as the sephenus opening.

The third specimen presented by Dr. Peters was :

THE HEAD OF METATARSOL BONE OF GREAT TOE REMOVED FOR HALLUX VALGUS.

Both feet were affected to a marked extent, but had given the patient but little trouble until a year ago, when he cut the left one over the joint with an axe. A sinus formed which has discharged at intervals ever since. The great toe was markedly displaced outwards so that its point quite reached the middle line of the foot. There was a large bunion over the inner side of the joint, and the head of the metatarsol bone could be felt to be enlarged and irregular in shape.

On examination of the head after removal it is found that the cartilaginous surface has become prolonged upon the outer side, while that upon the under side is eroded, and the bone beneath is in a carious condition, and communicates with the sinus which opens on the inner side of the foot. The synovial membrane also is in a granular fungating condition.

There is an enlargement of the bone about quarter of an inch thick just behind the head, evidently the result of a chronic osteoplastic periostitis. This added greatly to the deformity which was present.

The extensor tendon, as well as the flexor tendons, with the sesamoid bones, were found to be displaced to the outer side, while the internal lateral ligament was thinned and lengthened.

Causes of condition : Hoffa, Ellis and others attribute the condition to the wearing of tight, medium pointed boots, and point out that it does not occur in those who have never worn boots. Rédard and Anderson consider that it may be due to an irregularity in development, and say that it sometimes occurs in those who have not worn ill-fitting boots.

Some attribute the deformity to the lengthening of the internal and shortening of the external lateral ligament, but these charges are usually regarded as the result rather than the cause of the deformity.

Nélaton considered it due to contraction of the extensor proprius balbucis ; Ducheune to paralysis of the abductors ; Dubrueil to excessive action of the adductors.

The displacement is so constant an accompaniment of chronic rheumatism, gout and ostes-arthritis that an arthritic origin appears probable, though Hoffa believes that the deformity produced by

other causes is the determining cause of these affections falling upon the toe.

Carcinoma of Breast.

Dr. Wm. Oldright showed sections made by Dr. Goldie of the breast and one of the axilliary glands removed by Dr. Oldright a few days before the November meeting of the society, and presented by him at that meeting. Dr. Goldie describes the condition as a rapidly growing carcinometous invasion of an adenomatous breast. Two were felt after operation in the lower triangle of the neck a short distance above the claricles, but the patient was so badly affected by the anæsthetic that we were satisfied with having thoroughly cleaned out the thornen and axilliary regions, and as far up above the axilliary and salcharmi vessels as could be reached from beneath the claricle, leaving these glands for a subsequent operation. Dr. Oldright thinks it desirable to remove these glands, but their pathological condition is a point of interest in view of the existence of adenoma and carcinoma in the breast and gland removed.

Dr. Peters: The specimen undoubtedly shows carcinoma, but there are also parts showing (1) As to the other glands they are no doubt invaded with cancer, as the lymphatics pass from the axilla to the neck. He thought cases of carcinoma of the breast with enlarged glands in the neck hopeless. The large size of the tumor pointed to an adenomatous growth primarily.

Dr. Primrose, discussing Dr. Oldright's paper, called attention to the fact that lymphatics from the inner quadrants of the breast pass to the sternal group of glands along the internal mammary artery, and it is a curious circumstance that these sternal glands are not more frequently involved in the cancerous process in patients suffering from mammary carcinoma. Mr. Watson Cheyne, in his recent papers on cancer, lays it down as a fundamental principle in operations for cancer that the primary growth should be removed plus the first set of lymph glands and the intervening lymphatic vessels. This principle, however, cannot be observed in operations on the breast, as the sternal glands cannot be removed. Fortunately it appears that the axilliary group of glands is much more frequently involved than the sternal glands, hence the explanation of the fact that removal of the axilliary glands alone is necessary in the majority of cases.

Dr. H. H. Oldright described a case which had been operated on for cancer of the right breast some years previous to death.

On post mortem examination there was found cancerous invasion of the uterus and a disseminated infiltrating growth, involving the

whole length of the large and small intestines and the stomach. The liver was also involved.

Could the infection have passed by way of the right ventricle through the lungs and to the intestines without infection of the lungs, or was the uterine growth a primary new seat and the intestinal lesions secondary to it? The right lung was shrivelled into a carnified moss, and the pleura was full of old cheesy pus.

In reply Dr. Oldright said that there were only two glands discovered in the neck; they were not hard. He had seen and removed axilliary glands not malignant in breast operations; once when the case was one of galactocele. So that he thought we ought not to leave a patient to certain death from a malignant breast, preceded by a pimple and filthy ulceration, on account of the existence of the two glands found in this case.

Dr. W. J. Greig presented a specimen of "Spontaneous rupture of a fatty heart."*

Dr. Rudolf, discussing Dr. Greig's paper, pointed out that there were several other partial ruptures in the wall of the left ventricle, showing that the muscle must have been in a very feeble condition, and that the rise of blood pressure caused by the operation was the last straw that caused the rupture. The patient could not have lived long.

Dr. Anderson, who made the autopsy, said the partial ruptures were made post mortem in trying the freability of the heart muscle.

PREPATELLAR CYST.

Dr. H. H. Oldright presented a prepatellar cyst containing two loose bodies and a band of fibrin passing across the interior.

The process is generally tubercular.

There was no attempt to prove the tubercular condition in this case.

ANTI-MORTEM CARDIAC THROMBUS.

Dr. Wishart: Child, four years of age, operated upon for enlarged tonsils and adenoid vegetations. During the administration of chloroform the patient collapsed and was revived with great difficulty. On the afternoon after operation the pulse was irregular and 140 per minute. Patient slept poorly that night, and next morning there were marked cyanosis and diarrhœa, and later cheque stones respiration. Death occurred thirty-one hours after operation.

*See page 80

At autopsy an anti-mortem thrombus was found extending from the superior vena cava through the right auricle and ventricle into the left pulmonary artery beyond the bifurcation. A small clot was also found in the left auricle.

A discussion took place regarding chloroform poisoning, but it was generally thought that this thrombosis was more the result of the weakened circulation dating from the collapse during operation.

Dr. Wishart also presented the thorax and abdomen of a male over sixty years of age, showing complete transposition of the viscera—the liver to the left and spleen to the right. The cæcum was on the left side and the rectum passed into the pelvis from the right.

The stomach is about one-third the normal size, with a lesser curvature, about two inches in length; it is tucked in deeply under the right lobe of the liver, and the duodenum begins to the right of the median, and is in full view when the transverse colon is removed.

The heart is to the right, and the left lung presents three lobes.

There are two superior venæ cavæ connected by a small vein running obliquely downward from right to left in front of the aortic arch. The right vena cava passes into the coronary sinus and so into the left auricle.

Dr. R. D. Rudolf presented frozen section of a dog who died during the administration of chloroform. (See page 82.)

UMBILICAL HERNIA IN A SEVEN MONTHS' FŒTUS, CONTENTS CONSISTING OF THE GREATER PART OF THE LIVER.

On the birth of the child the physician in attendance found a large umbilical hernia forming a tumor somewhat larger than a hen's egg. An attempt was made to reduce it, but this proved unsuccessful. On post-mortem examination the hernia was found to consist of the right lobe of the liver in its entirety. It formed a globular mass in the centre of which was a funnel-shaped depression into which the umbilical vein passed. There were several fissures on the surface of the lobe below the point of entrance of the umbilical vein, these indicating a partial subdivision of the lobe into a series of lobules. Between two of these lobules the gall bladder lay, and from it the cystic duct passed back to join the hepatic duct.

I know of no instance described in which this condition has been found. It may be explained by referring it to a persistence of an early fœtal condition. The liver is developed as an outgrowth from the ventral aspect of the fore gut, and lies in immediate relation to the umbilical vesicle; if we suppose that the abdominal wall were

deficient in its development, so that a fissure existed in the umbilical region then the liver would be more likely to occupy that fissure, in virtue of its position, than any other abdominal organ.

Dr. Anderson asked if it were not unusual to have such an opening above the umbilical opening.

Dr. Primrose agreed.

Dr. Peplar said it was common in practice to find a hernia at the umbilicus. He asked what the contents of such a sac usually were

Dr. Primrose said intestine is usually found in such herniæ.

Microscopic preparations of carcinoma of the penis and inguinal glands, and of tuberculosis of the Fallopian tube were also presented by Dr. Primrose.

The meeting then adjourned.

Book Reviews.

The following books and pamphlets have been received:

A System of Practical Medicine. By American authors. Edited by Alfred Lee Loomis, M.D., late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M.D., Professor of Medicine in the New York University. To be completed in four imperial octavo volumes, containing from 900 to 1,000 pages each, fully illustrated in colors and in black. Volume III.—Diseases of the alimentary canal, peritoneum, liver and gall bladder, spleen, pancreas and thyroid gland, chronic metal poisoning, alcoholism, morphinism, infectious diseases common to man and animals, miscellaneous subjects. For sale by subscription. Per volume, cloth, $5; leather, $6; half morocco, $7. Lea Brothers & Co., Publishers, Philadelphia and New York. 1898.

Diseases of the Eye. By Edward Nettleship, F.R.C.S., Ophthalmic Surgeon at St. Thomas' Hospital, London; Surgeon to the Royal London (Moorfields) Ophthalmic Hospital. Revised and edited by W. T. Holmes Spicer, M.A., M.B., F.R.C.S., Ophthalmic Surgeon to the Metropolitan Hospital and to the Victoria Hospital for Children. Fifth American from the sixth English edition. With a supplement on "Color Blindness," by William Thomson, M.D., Emeritus Professor of Ophthalmology in the Jefferson Medical College of Philadelphia. Handsome 12mo of 521 pages, with 2 colored plates and 161 engravings. Cloth, $2.25. Lea Bros. & Co., Publishers, Philadelphia and New York. 1897.

Tuberculosis of the Genito-Urinary Organs, Male and Female. By N. Senn, M.D., Ph.D., LL.D., Professor of the Practice of Surgery and Clinical Surgery, Rush Medical College; Attending Surgeon to the Presbyterian Hospital, Chicago; Surgeon-in-Chief. St. Joseph's Hospital, Chicago. Octavo volume of 317 pages, Illustrated. Price, cloth, $3 net.

The American Year-Book of Medicine and Surgery.—Being a yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. Collected and arranged with critical editorial comments by Samuel W. Abbott, M.D., John Abel, M.D., J. M. Baldy, M.D, and 25 others, under the editorial charge of George M. Gould, M.D. Illustrated, cloth $7.50, half morocco $8.50. Philadelphia: W. B. Saunders: Toronto Agency: J. A. Carveth & Co.

Medical Items.

DR. W. H. ELLIOTT, has been appointed physician to the Sanitarium at Gravenhurst.

DR. W. C. HEGGIE (Tor. '86), after practising in Michigan for ten years, has returned to Canada, and settled in Toronto.

WE gladly welcome the new *Philadelphia Medical Journal*, the first number of which was issued January 1st, 1898. The fact that Dr. George M. Gould will be the chief of the editorial staff will give great satisfaction to the profession of Canada. We wish for Dr. Gould and his journal the highest possible success.

WE note with pleasure the appointment of Dr. Price Brown to the staff of the *Journal of Laryngology, Rhinology and Otology*. The *Journal* enjoys the reputation of being the highest authority in its special lines in Great Britain, and Dr. Price Brown will hereafter look after its interests in the Canadian field.

NEW MEDICAL KNIGHTS IN GREAT BRITAIN.—Three well known and highly distinguished Scotchmen have been honored by Her Majesty. Dr. John Struthers, one of Edinburgh's great anatomists, and Dr. John Batty Tuke, the great chemist, have been knighted; while Dr. William T. Gairdner, Professor of Medicine in the University of Glasgow, has been made Knight Commander of the Bath, or K.C.B.

"THE BRITISH MEDICAL JOURNAL."—At the meeting of the Council of the British Medical Association on January 19, Dr. Dawson Williams, assistant editor, who has been connected with the editorial department of the *Journal* for seventeen years, was unanimously appointed editor of the *British Medical Journal*. At the same time Mr. C. Louis Taylor, who has been sub-editor for the last eleven years, was appointed assistant editor.

DECISION OF NEW YORK COURT AGAINST A DOCTOR.—Forty-four dollars and fifty cents for medical services was sought to be collected, as upon an "account stated," in the case of Callaghan against (Margaret) O'Rourke. The evidence for the plaintiff was: That he rendered services as a doctor for the defendant's husband in his lifetime. That, upon one of his calls, defendant's husband paid him $1. After the husband's death, the doctor presented his bill for such services to the defendant. She paid him $5, and offered to pay him $20 in settlement of the bill, saying to him that he had better take $20 or nothing. No evidence was

given upon the part of the defendant. The justice rendered judgment in favor of the doctor. The defendant appealed to the county court, which affirmed the justice's judgment. Thence she appealed to the Appellate Division of the Supreme Court of New York, which latter reversed the judgments of the courts below, with costs and disbursements in those courts, May 26, 1897. It holds that the facts proved were not, under the circumstances, sufficient to establish an account stated between the parties. The doctor's own evidence showed that all the services rendered by him were for the defendant's husband personally. There was no pretense that the defendant ever employed him, or in any way suggested or requested that he attend her husband. There were never any dealings between the plaintiff (doctor) and defendant prior to her husband's death. Under such circumstances, the Appellate Court declares that there was no legal or equitable claim upon the defendant by the plaintiff, and that for that reason there was nothing upon which an account could be stated. Hence the reversal of judgments.

[The above is a condition of affairs that presents a great many possible financial losses. We should have legislation on the subject of accounts for medical services, making them a preferred account.]

Obituary.

Louis Crusius, M.D.—Dr. Louis Crusius, the well-known artist-physician of St. Louis, died at his home on January 3rd. Dr. Crusius was widely known through his humorous sketches in *The Journalist*, *Medical Fortnightly*, and other mediums. His last work, an elaborate calendar for the Antikamnia Chemical Co., was strangely significant of his sudden meeting with the red-robed spectre which appeared on the first page, and in whose bony features were depicted, by the artist's own hand, the expressions of defiance and revenge.

Joseph O'Dwyer, M.D.—Dr. Joseph O'Dwyer, of intubation fame, died at his home in New York, January 7, 1898, aged fifty-seven years. It is not generally known, we think, that Dr. O'Dwyer, although born in the United States, spent a goodly portion of his boyhood days in Canada. He lived for some time near London, Ontario, and studied medicine under the tutorship of a Dr. Anderson. He went to New York in 1864, graduated in 1866, and immediately commenced practice in that city. For many years he was recognized as a scientific and skilful obstetrician, and he attended in private practice over two thousand cases of midwifery.

William McClure, M.B.—Dr. William McClure, of Thorold, died January 23, after a somewhat prolonged illness. He received his medical education in the Toronto School of Medicine, and graduated in the University of Toronto in 1872. He commenced practice in Thorold in the year 1875, and remained there till the time of his death.

JOHN CRONYN, M.D.—Dr. John Cronyn, of Buffalo, was well known to the profession in Toronto and throughout Ontario. He was born in Ireland in 1825, and came to Toronto in 1843. He commenced the study of medicine in 1855, and received the degree of M.B. from the University of Toronto in 1859, and M.D. in 1860. After graduating, he went to Buffalo, and was one of the most successful physicians in tha city. He attended many of the meetings of the Ontario Medical Association, and was one of its honorary members. He was a well-educated and cultured gentleman, and a thoroughly good physician, not only beloved, but highly respected by all who had the pleasure of his acquaintance. We mourn our loss through his death—and well we may, for there are not many left in our ranks like Dr. John Cronyn.

THE

CANADIAN PRACTITIONER

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MANAGER ADVERTISING DEPARTMENT:
MR. W. LLOYD WOOD.

PUBLISHERS:
THE PRACTITIONER PUBLISHING COMPANY,
TORONTO.

VOL. XXIII.] MARCH, 1898. [No. 3

Original Communications.

THE GREAT OMENTUM.

WITH MORE ESPECIAL REFERENCE TO THE PART PLAYED BY IT IN INFLAMMATIONS OF THE ABDOMINAL VISCERA.[1]

BY J. G. ADAMI, M.A., M.D.

Professor of Pathology McGill University, and Pathologist to the Royal Victoria Hospital, Montreal.

WHEN so much has been written upon other organs, it is remarkable how little attention has been paid to the great omentum. There is a scanty literature upon pathological conditions of the organ—if organ it may be termed—mainly upon cysts and tumors of the same. This, with a few papers upon its development, and still fewer upon sundry points in its histology and upon

1 Being the main body of a paper read before the Toronto Pathological Society, December 29, 1897.

surgery, and until the last few months practically none upon its physiology, represents all that has been written during the century. Evidently, according to the *Index Medicus*, during the last ten years, when medical scribbling has been at its height, not two papers per annum have been published of which the main subject has been some one or other condition of this viscus. And yet this is the ominous organ of the augurs, every aspect of which, studied by them, was found full of fate. The older priestly comparative anatomist is long past and gone, and now no modern comparative anatomist so poor as to do the omentum reverence.

Thus, if following the time-honored custom one wishes to lead gently up to his subject—to introduce it in a respectful manner—by referring to the observations and conclusions of those who have gone before, he finds himself confronted by the fact that here, in connection with the great omentum, there is little to be said unless he travels back through the centuries. There is no voluminous literature, no array of modern continental authorities, whose names, in length and difficulty of pronunciation, are in inverse proportion to the facts and theories they bring forward. There are, it is true, isolated observations upon the omentum, of recent date—observations of great value by Ranvier, Durham, and others; but for any attempt at broad generalization upon the functions of the same we have to wander back to the seventeenth century, and beyond that to the fathers of medicine. And strangely enough, passing back to the limits of medical history, we find that old Hippocrates noted that which, as I shall have later occasion to point out, was perhaps more nearly correct than any of the observations for long centuries following. In addition to his aphorism that if the omentum protrude it necessarily mortifies and drops off, he makes a longer reference in his book "*pezi topon*." Writing concerning exudations, he turns to one side to refer to the spleen. "In fever," says he, "the spleen becomes enlarged, increasing in size as the body becomes emaciated. Indeed, everything which causes the spleen to become enlarged consumes the body. When the body becomes emaciated, if the spleen be swollen and the great omentum attenuated at the same time as the body, then the fat which was in the omentum is dissolved, and when the organ is free from fat, the growing spleen furnishes a flux, and the omentum, which is close by, which has vessels, and those vessels empty, receives that flux."[2]

It is true that Littré and Adams and the modern commentators regard the work in which this passage occurs as almost certainly not

[2] Œuvres complètes d'Hippocrate, Littré's edition, Paris, 1849, p. 314.

by Hippocrates. But within the last few weeks, Spaet, in his study of a remarkable manuscript (*Anonymus Londinenis*, one of the rich horde recently unearthed in Egypt by the British Museum authorities), points out that Hippocrates clearly indulged in theoretical speculation, and that the commentators have been wrong in taking from him all the so-called philosophical writings. Hence it is not impossible that the treatise is by the physician of Cos. Whoever be the author, it is curious that he should have spoken of this flux into the omentum almost with the same breath with his discussion upon dropsy. Indeed, he appears to imply that this flux is dropsical. The wise old Malpighi, commenting upon this passage, carries the connection to its natural conclusion and makes the definite suggestion that from the omentum the flux may pass into the abdominal cavity and be a cause of dropsy. It is remarkable that, so far as I can read, no authority since has taken up the relationship between this vascularity (and delicacy) of the great omentum and the development of ascites. There is only the suggestion of a German country practitioner, one Landgraf,[3] who in 1870 called attention to this possible function. He gave the notes of a case of ascites associated with cardiac disease and of many months' duration, which had proved absolutely intractable to fourteen tappings. Being called one day to the case, he found the abdominal distension so great and the respiratory difficulty so alarming that death appeared imminent unless the fluid were removed. He had no trochar with him and was compelled to perform paracentesis by means of a lancet and a piece of tubing. As a result there developed at the incision a hernia of the great omentum of the size of a walnut. The protruding tissue true to Hippocrates' aphorism, sloughed off, and there was no further untoward result; but within a few days the ascites came to an end, and, after one further tapping, never recurred. Landgraf makes the obvious, though it may not be absolutely logical, suggestion that the great omentum is largely responsible for the exudation of ascitic fluid. At the last moment I find that a *confrère* here in Toronto, Dr. J. F. W. Ross, has arrived at a similar conclusion, and that in his very full article upon the omentum[4] he quotes Lawson Tait as holding like opinions.

But if Hippocrates may have come near to indicating one important function of the viscus, that, namely, of regulating to a greater or less extent the amount of fluid passing into (and out of) the peritoneal cavity, those who followed him held other views. We owe to

3 *Deutsches Archiv fur Klinisches Medicin.*
4 *American Journal of Obstetrics*, xxviii., 1893, No. 6.

Aristotle the commonly accepted opinion that it is formed of light membranes, and so placed, covering the intestines, as "to preserve the innate heat of the body." Galen accepted and expanded this view. He gives the case of a gladiator who, having lost his omentum through an abdominal wound, recovered from the injury, but thereafter felt cold in his abdomen. [5] So far as I can find from inquiry, this Aristotleian view remains the most commonly accepted at the present day.

With the renascence of medicine the obscurity of the omentum made it the text for numerous most wild discussions. In his "Exercitatio de Omento," Malpighi collects some of the leading theories. Thus, for example, Fabricius ab Aquapendente (well known in connection with the discovery of the circulation) held that it was the seat of those winds which so torture hypochondriacs. Laurentius, Bauhinus, and others considered that it collected the humors going to the intestine or the excrementitious matters from the spleen, while Cordæus taught that it was a second stomach or food-store from which the stomach received again the food; whence, by him, man was declared to ruminate like unto brute beasts.

Malpighi himself was cautious of attaching any function to the viscus. He was even doubtful whether to accept the vulgar opinion as to its heat-preserving properties. He was especially interested in its relationship to the storage of fat, and has not a little to say concerning the use of fat and its nature as a food. Thus he concludes that fat is important to the economy, is taken up from the intestines and stored in the great omentum and other regions for further use. In short, Malpighi represented the reaction to the wild theorising of his immediate predecessors, and from his time onward it may be said that the theorizing has given place to agnosticism, or, rather, to indifferentism. With rare exception, no one nowadays troubles to think of the viscus.

Possibly this indifferentism is a right attitude. The great omentum varies much in size; and when an organ is very variable and at times almost absent, we are, in general, correct in regarding it as of relatively little use—as a disappearing and *therefore* useless structure. I think, however, that it is not quite so variable as one is apt to regard it; very often, it is true, the coils of the small intestine are wholly exposed, and the first impression is that the omentum is inconsiderable. But it is there, and if the mass of delicate membrane be unravelled it is most often found to be quite extensive.

5 Galen : De usu partium. Frobenius' edition. T. i, lib. 4, 1567, p. 1244.

In 150 consecutive autopsies I found it—

Coiled under the transverse colon,	10 cases.
Coiled under the stomach,	1 case.
Coiled in front of and above the transverse colon,	5 cases.
Coiled and lying over the transverse colon to the left,	2 "
Passing up over the liver, without adhesions,	2 "
Passing up under the liver,	1 case.

Studying the organ in man, we are at a disadvantage, for most of the human subjects of the pathologist and anatomist have been bed-ridden for some little time, or may have suffered from disease of the abdominal cavity. With long continuance in the supine position, it is more than probable that this floating membrane becomes liable to assume relationships which would rarely be found in those suddenly killed. My observations tally with McLeod's suggestion that when the omentum is coiled up, the subject, in most cases, has been upon his back for some little time.[6]

On the other hand, where the omentum seems particularly voluminous, completely covering over the whole anterior aspect of the lower abdomen, I have found that there may again be deception. Thus, only on Sunday last, at an autopsy upon an individual presenting cerebral disturbance with no abdominal lesion, the edge of the membrane passed well beyond the pelvic brim into the pelvis; but here the stomach was large and full, the transverse colon crossed a good inch below the umbilicus, and as a consequence the increased size of the omentum was only apparent.

Granting all this, we must, however, grant also that there are variations—great variations. It can be most voluminous ; it is also stated to have been found completely absent. Personally I have not come across this last condition. In the above-mentioned 150 autopsies, there were two subjects, both old men, in which the omentum had a shrunken appearance and was only an inch and a half across, while in a third case, a phthisical patient of twenty-six years, it was represented by three tags of delicate reticulated membrane, one 6 x 6 cm. (2.25 x 2.25 inches), arising from the postero-inferior aspect of the middle region of the transverse colon, one 7x6 cm., from the antero-inferior aspect of the same region, while a third, 6x14 cm., passed up from the left extremity of the transverse colon to beneath the left lobe of the liver.

6 Durham points out that in rabbits and guinea pigs in which peritonitis has been induced, the omentum becomes rolled and folded up, and notes that he observed a similar condition in a young child. While such rolling up does occur in association with acute peritonitis, my note show that it is far from being a form of constant condition. (Durham, p. 9, " Pathology," IV 1897, p. 355.)

In the lower animals it is much more regular in size and position, and there can be no question of its being a disappearing organ. Indeed, the contrast between the condition in man and brute might also seem to give support to the protective apron theory and to the further theory that the assumption of clothes by man is at last beginning to tell upon the internal organs—to lead to the transmission of atrophy of the internal apron in consequence of disuse!

But were the "apron" theory valid, we should expect to find an inverse relationship between the development of the heat-retaining panniculus adiposus and the development of the omentum. This we fail to find. When there is a thin abdominal wall, there, as a rule, the omentum is thin and with little fat. The apron theory must be put aside.[7]

What, then, can we say concerning it and its function or functions? It seems to me that there is one feature about the great omentum which is the all-important feature histologically and physiologically, and that is the main characteristic of its structure. It is true that it is a membrane, or, more correctly, a double membrane folded upon itself, the two layers forming the anterior and posterior

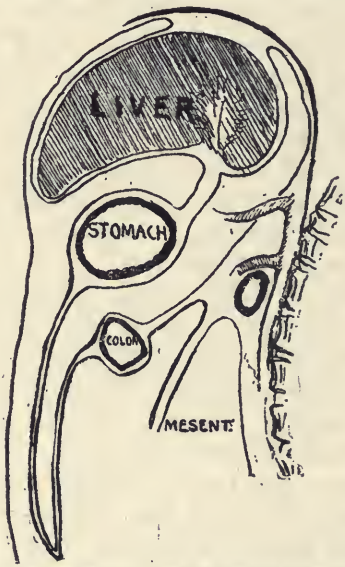

Fig. 1.—Diagrammatic representation of the relationships of the Great Omentum. (Modified from Lockwood.)

7 That is, in its usual presentation. But it is possible that when, through cold, the vessels of the abdominal parietes become contracted, and the splanchine vessels distended and congested, the great omental vessels share in this congestion, and that thus a warmed and congested membrane is interposed between the cooled parietes and the intestines.

serous investments of the stomach, passing downwards to form the anterior portion of the omentum, and then doubling upon themselves to form the posterior aspect and travel upward to enclose the transverse colon. But these membranes fused together are nothing but endothelial and connective tissue-elements. What is characteristic of all great omenta, however delicate, or however loaded with fat, is their remarkable vascularity. The vascular supply is altogether in excess of the needs of the membrane itself; and if the great omentum has any function, that function must be sought for through the vascular system. Without exaggeration, the great omentum may be regarded as a mechanism for supporting and keeping in position a rich arborization of delicate vessels separated by as slight a cell-layer as possible from the peritoneal cavity. As might be expected, with the branching of the main vessels, the finest and most delicate vessels are largely collected toward the periphery and along the free border of the omentum. Here it is, therefore, that the most prompt reaction is liable to occur.

It is from this point, then, that we must start if we are to appreciate the part played by the omentum in the economy. I have already hinted that it is from the abundant network of delicate vessels that there may be abundant flow of fluid into the abdominal cavity. Similarly the rich system of contained lymph-spaces and lymphatic vessels, and, indeed, of blood capillaries, may be the means of rapid absorption of fluid from the same cavity.

Much as I should like this evening to enter into the more physiological aspects of the omental functions, I must desist; for my personal observations along the lines just indicated are not as yet complete or in a proper state for bringing before you.[8] What I wish to bring before you to-night is the evidence we possess concerning the activity of these omental vessels in conditions which are constantly being brought before our eyes, but which, it is worth noting, would appear not have been thought worth noting. I refer to their re action in the localized inflammations of the abdominal cavity, and the results of that reaction in the shape of omental adhesions. I have hunted up all the literature at my disposal. Every one refers to these adhesions, but no one would seem to have thought it worth while to tabulate them or to record their frequency. I cannot pre-

8 Durham (*loc. cit.*) records some most interesting observations upon the part played by the leucocytes in relation to the surface of the great omentum, but does not indicate with full satisfaction the extent of passage of fluid, leucocytes, or foreign particles into or out of the viscus. Similarly, Adler and Meltzer (*Journ. of Exptl. Medicine*, i., 1896, page 482) discuss very fully many important points in connection with the absorption of fluid from the peritoneal cavity, but their observations stop short of determining the exact regions of passage of fluid into the lymph-spaces of the peritoneal wall.

tend that my own observations are as full as I should like. Nevertheless, in 150 consecutive autopsies, in which the abdomen was examined, I possess brief notes upon the more obvious conditions observed, and now, reviewing my notes, I am surprised to find how very common are these attachments, and am impressed at the evidence afforded of the rapidity with which the omentum appears to apply itself to an inflamed area, becoming sympathetically the seat of inflammation, becoming adherent by plastic, and later by fibroid adhesions. Few, I fancy, realize the rapidity of the process. So delicate are the fine vessels, so small is the layer separating them from the peritoneal cavity, that they readily respond to any irritant. Probably, as Durham's observations would seem to show, the rapidity of the adhesive process is further and largely associated with the remarkable adhesiveness of leucocytes to the omentum in cases

Fig. 2.

of inflammation, and the local accumulation of leucocytes upon the omental surface is the immediate precursor of the fibrinous cementing together of inflamed organ and overlying membrane.

The autopsies referred to were upon the subjects in the post-mortem theatre at the Royal Victoria Hospital—a general hospital, open to all cases of disease save the acute exanthemata, at all ages.[9]

Adhesions to the Abdominal Walls.—As might be expected, there were several (8) instances of generalized adhesions, either plastic and acute, or fibroid and chronic, in cases of recent or old generalized peritonitis, and several of localized adhesions along the sites of operation-wounds. Many of these will be referred to later ; six were either in the middle line below the umbilicus or in the right inguinal region (for appendicitis), where the adhesion was in the right flank

9 The pathological diagnoses of these cases are to be found in detail in the annual reports of the Hospital for the years 1894 and 1895.

following incision into a pericecal abscess. In the two cases there were old adhesions of the edge of the viscus along the pubic crest anteriorly. Both of these were cases of generalized tuberculosis, and in both, although there were subserous tubercles of the ileum in the pubic (or suprapubic) region, there were no adhesions of the under aspect to the intestines. There were four instances of old adhesions in the left flank, two in the right flank over the ascending colon, and two to the parietal peritoneum, covering the under surface of the ribs on the right side. All these, in the absence of operation-wounds or definite local disturbance, may have been indications of a previous general peritonitis. There were three examples of incarceration in an umbilical hernia, in one of which there had been "reduction en bloc," and in one case there was attachment to a secondary cancerous nodule at the navel. In one case, also, a large portion of the right border passed into the right inguinal canal, and was adherent over the testis. In a remarkable case of neglected gangrenous appendicitis, with suppurative thrombosis of the mesenteric vessels and retroperitoneal abscess, a large tag of the right border passed down between the intestinal coils to the hind wall of the abdomen, where it was adherent to the right of the root of the mesentery, near the duodenum. Upon separating the recent adhesions, abundant pus welled out from a retroperitoneal abscess Evidently this tag had prevented general peritonitis. In another case the right border passed down into the pelvis and was adherent to the pelvic wall, forming the roof of a localized pelvic abscess. Here, again, the generalization of a suppurative process was arrested by this means. I shall speak of the walling in of perityphlitic abscesses in connection with the appendix.

Of equal interest are the localized adhesions discovered in connection with the different abdominal viscera. There were, as might be expected, numerous examples of attachment to the intes tines.

Stomach.—In a case of gastric ulcer, with perforation, plastic adhesions of the omentum doubled upwards upon itself occurred over the area where the large ulcer (upon the anterior aspect of the organ) had been brought together by a Lembert's suture. The operation had taken place nine hours and a half before death.

Small Intestines.—In two cases of general peritonitis, one acute, one chronic, there were numerous adhesions. A case of traumatic rupture of the jejunum near the duodenum, in which Murphy's button was applied without success, showed the right border of the omentum adherent by plastic exudations over the seat of junction ;

and in another unsuccessful Murphy button case, where some four inches of the ileum close to the valve had been removed by Dr. James Bell for sub-mucous sarcoma, there were similar adhesions. (In both these cases the intestines had become necrosed and perforated at the mesenteric attachment.) Another case, from a man aged 24, presented a condition which I can only regard as an old healed intussusception. The upper half of the ileum was somewhat distended (11.5 cm. in diameter as compared with 8 cm. below), the obstruction being due to the presence of an annular constriction admitting a cone 6.3 cm. in circumference. The mucosa over this ring showed no cicatrix, but externally there were evidences of old inflammation in the shape of small longitudinal bands running from above the constriction to below it, while a delicate band of the right border of the omentum was adherent to the intestinal wall in the immediate neighborhood.

Appendix.—In four cases, all acute, plastic adhesions were found forming portions of the retaining walls around the abscess in perforative appendicitis. In one case already recorded by Dr. C. F. Martin, there was old perityphlitis without marked disturbance of the appendix, and here again the right border of the omentum was adherent and had helped to cause the cicatrical and banded obstruction of the ileum, which eventually led to peritonitis and death.

Colon.—I find two examples of adhesion to the sigmoid flexure —one a very interesting case of huge idiopathic or congenital dilatation, the adhesion being to the lower end of the flexure, where the dilatation gave place to constriction, but apparently was not the primary cause of the same.[10]

Rectum.—Two examples are recorded of adhesions to the rectum. Case 1. Plastic, to the first part anteriorly, after removal by Dr. W. Gardner of a parovarian cyst and encysted pelvic abscess. 2. Chronic, in a case of pernicious anæmia with arrested tuberculous complications, old apical tuberculosis, perihepatitis, and other evidences of generalized peritonitis, possibly tubercular.

It is, however, when we come to the other abdominal viscera that we meet with some of the most remarkable instances of this liability of the omentum to form local attachments over inflamed areas.

Liver.—Four cases. (1.) One was a case of atrophic cirrhosis, with ascites and sero-fibrinous peritonitis after repeated tappings, in which, it may be, that the accumulation of serum in the abdominal

10 C. F. Martin, *ibid.*, xxv., 1896-7, p. 697.

cavity had floated the omentum upward. (2.) A case of calcified old (?) hydatid cyst of the right lobe communicating with the adherent hepatic flexure of the colon. In this region the omentum was also adherent. (3.) Multiple pyemic abscesses of the liver. On the under surface of the right lobe, where the process was most extensive, bulging and almost bursting through Glisson's capsule, the omentum formed, as it were, a plaster over the region. (4.) In the fourth case there were similarly pyemic abscesses of the liver secondary to pericæcal abscess, with suppurative thrombosis of the mesenteric vessels. A case of subacute ulcerative cholecystitis, with eventual perforation, showed also chronic omental adhesions.

Ovary.—In one case I have recorded adhesions to the chronically inflamed left ovary.

Uterus.—In one case there were several adhesions to the fundus (a case of retained placenta, puerperal metritis, and septicæmia), while in two not a little remarkable instances of hysterectomy, with death some few days later, the omentum passed downwards in between the coils of the small intestine to the bottom of the pelvis, and formed adhesions over the stump of the uterus. In one of these it was the right border, in the other the central portion of the omentum that formed a broad, taut band, running downward to be attached. The resulting disturbances of the bowels, had these patients survived, can only be imagined.

I trust that I have not tired you with this detailed account of omental adhesions. As already stated, I have entered thus fully into the subject because I know of no similar record; 150 autopsies are not a great number from which to glean information, but the reverse. My set of cases is devoid of examples of most of the conditions of omental disease to which attention has been called by previous writers. There were no examples of penetrating wounds of the abdomen plugged by the membrane to which McLeod has more especially drawn attention[11], or of intestinal rents or perforations obtaining primary closure by similar means, which Gross was one of the first authorities to especially note.[12] Mine are ordinary consecutive and unselected cases; but as such, the fact that the omentum may gain attachment to every viscus lying in the abdominal cavity, and does this very frequently, is brought into strong

11 Kenneth McLeod. *Edinburg Med. Jour.*, xxiii., 1877 p. 1.

12 Gross: "System of Surgery," 5th edition, p. 664.

relief.[13] It may pass upward and become attached to the stomach or liver, may journey to the right and form adhesions over the cæcum and ascending colon in the neighborhood of the appendix, or backward to act as a plaster over a retroperitoneal abscess, and, what is still more remarkable, its edge may wander down into the pelvis and become fastened to the rectum, the ovary, or even to the stump of the uterus after hysterectomy. The number of autopsies is not great; but notwithstanding, we find this very large proportion of examples of old and recent abdominal inflammation with the omentum forming adhesions in consequence.

At first sight it looks almost as though the viscus were endowed with powers of active locomotion, and so soon as any localized injury and inflammation manifested itself, forthwith some portion of its border, more especially of its right border, formed a feeler, made its way to the affected area, and within a little time became adherent over it, thus helping to prevent the spread of the inflammation. It almost looks, I say, judging from the facts here thus far recorded, as though this were the case.

But there are other considerations to be brought forward before passing judgment. Although I have been able to adduce so many cases of localized abdominal inflammation, followed by omental adhesions, there were numerous examples in our 150 cases in which no such adhesions had been found, although similar lesions of various organs had been present. Naturally a table of these conditions would be much shorter, for it could include only acute and recent cases of local inflammation, in which the local lesion was progressing. Previous local disease without adhesions, followed by recovery, leaves little or no record. Add to this that it is much more difficult to wade through our somewhat voluminous post-mortem records and note every case in which there has been superficial inflammation of abdominal organs. I have, however, noted in them two cases of cancer of the stomach with perforation and perforative peritonitis; two cases of extensive cancer of the stomach and cancerous peritonitis (without perforation); two cases of very extensive tuberculous peritonitis, all without signs of adhesion anywhere; a similar case of perforated tubercular ulceration of the small intestine and perforative peritonitis, and at least two cases of well-marked subserous intestinal tuberculosis, without noticeable reactions of any

13 I have left the spleen out of this enumeration, because, while I have an occasiona note relative to omental adhesions of this organ, I recognize that our observations are far from complete, in consequence of the organ being pulled forward for bacteriological purposes before its relationship *in situ* could be properly examined. Strictly speaking, every splenic adhesion is an omental adhesion, because the organ is developed within the omentum.

kind in the omentum and neighboring parts. In a case of enteric fever with perforative peritonitis, as is the general rule, there was not a sign of plastic exudation or adhesion anywhere. In two cases of inguinal hernia the omentum appeared indifferent and unaffected; in one there was well-marked localized subacute peritonitis after incomplete reduction of the hernia; in the others the great omentum did not extend below the umbilicus, although there was plastic exudation around the operation-wound. A case of chronic cholecystitis, leading to empyema of the gall-bladder and perforative peritonitis (again a Murphy button case), showed neither old nor recent adhesions of the omentum. Doubtless I might multiply examples. I have, however, given you enough to show that the omentum does not by any means necessarily send out processes to cover over and adhere to inflamed abdominal areas. It is not merely a question of the quality of the inflammation that determines the adhesions. Here are at least a few examples in which plastic and adhesive exudation might easily have been set up—only the omentum did not manage to find its way to the injured area, and as a consequence no adhesions developed. There is no such protective sending out or wandering or chemiotaxis of portions of the omentum to cover over and guard areas of injury and inflammation.

It cannot be urged that the omentum broods like a beneficent Providence over the abdominal contents, descending to minister help where it is needed and to arrest the spread of harmful inflammation. For in the first place, as I have just remarked, there are inflammations and inflammations—where there is very acute disturbance, or where, again, as in typhoid and the later stages of exhausting illness, the reactive power of the organism has sunk to a very low ebb, a serous rather than a leucocytic and fibrinous exudation obtains; and where this is the case there can be no adhesions even though the omentum be lying over the area of injury. And in the second place, while in many cases it appears as though the apposition and adhesion of the omentum had been of the greatest benefit in walling in and localizing an acute inflammatory process, in others, the intervention of the membrane, however great its temporary value, results in serious inconvenience, not to say profound injury. When (to quote one of the examples already given) the omentum passes as a broad band deeply between the coils of the small intestines, to gain an attachment to the stump of the removed uterus or other pelvic organ, it must be admitted that there is serious traction upon and disturbance of the movement of the transverse colon, with grave danger of

obstruction to the small intestines. Indeed, Leichtenstern had collected in the seventies no less than twenty-nine cases of internal hernia of the intestines due to omental bands. To quote from Professor Welch's admirable address upon "Adaptation in Pathological Processes," delivered this year at Washington: "We see here, as everywhere, that nature is neither kind nor cruel, but simply obedient to law, and therefore consistent." [14] In the great omentum we have a singularly delicate vascular organ capable of reacting very rapidly to irritation. That is all that it is safe to say. How rapidly it can react is shown by the case already mentioned, in which, in a moribund girl, dying in nine and a half hours after suture of the perforated stomach-wall, there was already plastic adhesion of the organ over the sutured area. That it becomes adherent to organs so distant from the position in which it is usually found, as are, for example, the anterior aspect of the stomach, the right lobe of the liver, and the cervical portion of the uterus, is an indication of what is scarcely sufficiently realized, namely, that this delicate membrane must constantly be shifting its position, or, at the least, must, in cases of abdominal disturbance, be peculiarly liable to roll about. We think of it as normally covering over the coils of the small intestine, more especially above and to the left, and as very rarely passing lower than the pubic crest. Yet it must roll upward and descend downward, and in these gyrations it is that, being applied to an inflamed area its vessels become rapidly congested, serum and leucocytes exude, and the first stage of adhesion is set up.

14 Trans. Congress Am. Physicians and Surgeons, iv., 1897, p. 291.

SUPPURATIVE CHOLANGITIS.*

By Harold Parsons, B.A., M.D., M.R.C.S Eng., L.R.C.P. Lo d.
TORONTO.

THE specimen† I present is one of suppuration in the upper bile passages, and extension of the process into the surrounding tissues, with abscess formation, and general peritonitis. The patient was a woman of about 45 years of age, admitted to the Toronto General Hospital June 1, 1897, complaining of severe abdominal pain. Of the early history of the case nothing is known, and that of the present illness is very imperfect. I have, however, obtained the following points.

For some months past (the exact time not known) there have been repeated attacks of abdominal pain, said to be sudden in onset and very severe. They passed off rapidly. The pain was general, not localized. No jaundice was noticed, but her physician tells me that there was slight tinting of the conjunctivæ while under observation. With the pain there were chills and vomiting, and this symptom group recurred every four or five days, at times more often, at others less so, say once a week. They were said to last a short time, but one continued for about eight hours, as nearly as we can judge. The temperature rose with each attack. The final peritonitis appears to have come on about two and a half days prior to her admission to the hospital, and at that time the temperature was regularly intermittent, 103° or thereabouts each evening, and normal in the morning.

I saw the patient a day or so previous to her death. She was a large, stout woman, lying on her back in bed with thighs extended, vomiting frequently, face ashy pale and drawn, pulse rapid and wiry. Tongue furred and very foul. Respiration rapid and shallow. The abdomen was full and tympanitic, but palpitation was impossible by reason of the great abdominal pain. There was no jaundice. Autopsy June 4th, 1897, a few hours after death. Rigor mortis and

*Read before the Toronto Pathological Society.
†From the Pathological Laboratory of Trinity University.

post-mortem staining present. There was a general peritonitis, the intestines being matted together by a layer of grayish fibrin, easily broken down. The subperitoneal tissues were infiltrated and œdematous. The peritoneal fluid was increased and of a grayish, purulent appearance.

Heart.—Muscle was pale. No recent changes in the valves. Pericardial fluid not increased.

Lungs.—Showed congestion in the dependent parts—no excess of fluid in pleural cavities.

There was an acute spleen tumour.

Kidneys.—Negative.

Stomach.—Negative.

Intestines.—As above were matted together.

Liver.—About normal in size—free margin rounded. The surface was smooth, and in general of a dark brown color, but presented numerous areæ of a pale yellow color, varying in size, the largest measuring 5x5 cm. These were soft in comparison with the rest of the organ and the larger were distinctly fluctuating.

On section they exuded a curdy yellowish green pus, containing yellow masses appearing caseous. There was no odour. The walls were ragged and caseous in appearance, and the cavities opened directly into the bile ducts, and a connection between different cavities could be found by way of the bile passages. On section apart from the cavities, the ducts were found more or less dilated and to contain pus, the degree of dilatation varying in different parts. The walls were less ragged than those of the cavities, and about some of them there was a zone of pale, yellowish necrotic tissue immediately adjacent to the duct wall. The gall bladder was small and contracted, contained about half a drachm of brownish bile, no calculi, but a few grains of brown sand-like material.

The hepatic, cystic and common ducts were free—not dilated. The portal vein and its branches appeared normal.

No calculi were found in any of the upper bile passages, nor abscess cavities. The pus everywhere was tinged yellow, and under the microscope showed granules of bile salts.

PATHOLOGICAL REPORT.

There is general infiltration of the portal spaces, giving the appearance of a marked cirrhosis. Chronic passive congestion is seen in places, with fatty change in the liver cells, and increase of the connective tissue toward the centre of the lobules.

The sections show many large open spaces, presumably bile

ducts, the walls of which have been destroyed, leaving ragged, necrotic edges.

The abscesses vary in size, and, as far as can be seen, are always connected with the portal spaces. The bile ducts, in general, are dilated and devoid of their lining membrane, in one section, however, a large one was found with its cellular lining intact.

The abscess walls show a ragged, necrotic edge next the cavity, with nuclear fragmentation. Beyond this is a broad zone of infiltration, with polynuclear leucocytes in abundance, and increase of the connective tissue cells. Beyond this again, in some cases, there is a distinct filicous capsule. Over the more superficial foci there is a well marked perihepatitis.

BACTERIOLOGICAL REPORT.

At autopsy cultures were made in bouillon from the liver pus, peritoneum and heart's blood, and were plated in agar within one hour.

The pus from the liver was thick, tenacious and odorless, greenish yellow in color, with streaks of a darker yellow, due to bile coloring matter. Fresh specimens showed many polynuclear leucocytes and red blood cells, also larger cells with large, round, regular nuclei, and containing in their protoplasm granules, regular in outline, ovoid, yellow in color, and very infractive. Similar granules were found everywhere in the field lying free, and in some cases it was difficult to determine as to whether they lay upon or within the cell bodies. No protozooa were seen. Stained preparations showed many polynuclear leucocytes, but no bacteria.

By reason of the caseous appearance of the foci in the liver, preparations of pus were stained for tubercle bacilli, but were negative.

As a control test, several loops full of pus were inserted beneath the skin of the abdomen of a half-grown rabbit. The wound healed kindly, and the animal is still well—seven months after inoculation.

The agar plates—after 48 hours at 37.5 c.—presented many colonies, two of which seemed to differ. They were isolated, but proved to be similar.

The organism was a short, fairly thick bacillus, with rounded ends, freely segmenting. There were also longer and larger forms, with squarer ends.

Motility.—Very slight.

Bouillon.—Cloudy, stringy deposit.

Gelatine.—Free growth, but no liquefaction after many days.

Agar.—Diffuse, moist, greyish growth; free growth along the stab.

Potato.—Abundant moist growth of dirty, grey color.

Litmus Milk.—Decolorized and coagulated.

Glucose agar.—2 per cent. after twenty-four hours; free growth along the stab; abundant gas formation.

Ludol reaction—Distinct.

Diagnosis.—Colon Bacillus.

Peritoneal Exudak.—Stained specimens showed many pus cells, and bacilli, thick and fairly long, straight or curved, ends rounded, found in clumps, threads, and singly. They stain irregularly.

Agar Plates (48 hours at 37.5 C.) There was an abundant growth, and 5 colonies were isolated, differing in general appearances, coverslip preparations proved all to be bacilli, and subsequent examination on media showed them to be identical.

It was in all particulars, morphological and cultural, similar to that found in the liver.

Heart's Blood.—The bouillon culture was not plated till several days after its inoculation. The bacillus pyocyaneous alone was found. The relation of this to the general infection may rightly be called in question, and probably has no bearing of interest upon the case.

In the literature on the subject there are several pathological conditions spoken of as resulting from infection of the upper bile passages. Catarrhal cholangitis is recognized by all, and the suppurative form frequently referred to. Chauffard speaks of dilatations of the ducts as a result of the suppurating form, resembling abscess cavities, the duct walls being transformed into a true pyogenic membrane. This is the abces biliare of the French writers.

Labadie Lagrave has found minute abscesses in the submucosa of the duct wall opening into the lumen.

Chauffard further describes an ulceration of the duct wall with extension into the surrounding tissue producing the so-called periangiocholitis or pericholangitis of Courvoisier. Von Ziemsson likens this to the peribronchitis seen in pulmonary tuberculosis. This is marked in the specimen presented. An extension deeper into the liver tissue results in abscess formation, the cavities being in direct communication with the bile ducts.

Again, there is the condition of miliary abscess of the liver, and upon this Courvoisier and Von Ziemsson dwell at some length. The foci are outside the duct walls, they may be numerous, and as

large as a bean. He quotes the case of Seuffel, in which there were many such, as clearly defined masses of necrotic liver tissue, from which appearance the condition was called "Hepalitis Sequestrans." No connection was found between the foci and the vessels or bile ducts.

Von Ziemsson describes this formation as a primary infiltration of small areæ, with deposit of bile salts, then necrosis of the centre and suppuration around it, the contents become inspissated and form a soft plug. Any connection with the ducts is thought to be accidental. He suggests the name "Furunculosis Hepatis."

The same writer speaks of a more chronic cholangitis with increase of the connection tissue, there are dilatations in places and pouch-like formations containing calculi. Another form, somewhat similar, results in calcification of the duct walls.

A croupous inflammation is described by Rokitausky in which a whitish membrane is formed. The ducts become blocked with plugs of inspissated pus and bile salts, and dilatations may occur behind the obstruction.

Where ulceration of a duct wall has taken place and the patient has survived long enough cicatrization and stenosis of the duct occurs, but there is seldom opportunity for this.

Tubercular disease of the bile passages appears also to be a well recognized fact as shown by the writings of Tublet and Gaucher.

As to ætiology. There is a predisposing and an exciting cause. Biliary retention, from whatever cause, appears to be the most frequent predisposing factor, and calculi the most common cause of the retention.

Chauffard lays much stress upon biliary retention as a factor, and finds an analogy in the infection of the genito-urinary tract with retention of urine. The causes, he says, may be extrinsic—as tumors of the duodenum or head of the pancreas, or intrinsic—as new growths in the walls of the bile passages, and within the lumen of the ducts—as by impacted calculi, hydatid membrane, or lumbricoid worms.

From the experimental side there is confirmation of this point. Charcot and Gambault have produced biliary infection with angiocholitis and biliary abscess by ligating the common duct, and Netter found the bile septic (staphylococcus aureus colon bacillus) twenty-four hours after similar ligature.

Quite apart from retention, however, infection appears to take place. Hall White has reported a case complicating typhoid fever, without obstruction. Mayor Robson observed it as a complication

of influenza. It has also been found after cholera, yellow fever, pyæmia, puerperal septicæmia and dysentery. Calculi may give rise to it by direct irritation without producing obstruction. Not only have calculi been found in the lower bile passages, but in the intrahepatic radicles, and within the cavities of secondary abscesses (Von Ziemsson.) Instances of cholangitis are also on record with calculi only in the gall bladder. It has been suggested that the calculi in some cases are the result of changes in the upper bile passages and not the cause.

In this specimen no obstruction is to be found, and no calculi were present, and we may infer that there was no obstruction—certainly of any great duration—as there was no jaundice. There were, however, attacks of abdominal pain very suggestive of the passage of calculi, and it is possible that they may have all passed intra vitam, and although there was no actual impaction, may there not have been sufficient trauma produced to open up an atrium for an ascending infection?

Infections of the biliary tract are most commonly of an ascending character. Chauffard refers to a descending or toxic infection, such as is seen in acute phosphorus poisoning, and an ascending or bacterial.

The bacteriology of the bile and bile passages has an important bearing on this matter. Normally these are sterile, save at the outlet, and in the ampulla of Vater, where Duclaux and Netter have found the colon bacillus and staphylococcus pyogenes aureus; and we know the duodenum, at the papilla, to be the natural habitat of a long list of organisms of greater or less virulence. The boundary line between the sterile and septic zones is not well marked, and no great barrier against infection, and the bactericidal property of the bile, formerly believed to be so great, is now called in question by many. It is found that the colon bacillus and strophylococcus aureus readily multiply in it, and Birch is of the opinion that any failure of organisms to develop is due more to a poverty of nourishing substances than to any bactericidal action, which at the most he believes to be slight.

Three modes of infection have been suggested (1) through the wall of the gall bladder, (2) by the blood and (3) the ascending infection. The first is looked upon as hardly possible; the second is improbable; and the last is that now generally accepted. A striking example of this is a case reported by Ferguson, of Chicago. He had operated for cholecystitis, and all went well for several days when all the signs of a general septicæmia developed, terminating fatally. Autopsy showed a diffuse suppurative cholangitis.

The organisms found in association with cholangitis are numerous. Among them may be mentioned the staphylococcus pyogenes aureus (Netter, Martha, Dupré, Girode, Frankel), staphylococcus albus (Dupré and Klebs), streptococcus pyogenes (Dupré and Malvoz), pneumococcus and staphlycoccus albus (Girode and Gilbert), Typhoid bacillus (Gilbert, Girode and Dupré).

Dupré has also isolated a diplococcus, a diplobacillus, and an encapsulated bacillus, as yet unidentified, and the bacillus saprogenes liquefaciens. The bacillus coli conummis has frequently been found, and some writers uphold its causative influence very persistently. Mayo Robson says it produces an exudative inflammation in the bile passages and abscess. We know that its virulence varies greatly; at one time it is harmless, at another it may produce a local abscess, and again a fatal septicæmia.

Chauffard and others think it plays an important part in biliary infections, equal to that of the pyogenic cocci in infections of the genito-urinary tract. It is, however, such a widely distributed organism that its presence in pathological conditions is often looked upon with suspicion, and especially so in post-mortem work, now that so much is said regarding the invasion of the body by organisms during the death struggle. Then again, the work of Barbacci on perforative peritonitis shows the tendency of the colon bacillus to overgrow other bacteria that have originally been present.

The same controversy has arisen over the bacteriology of appendicitis, the colon bacillus being the chief infecting organism, according to some writers. In a series of cases I have found a variety of bacteria present, the number depending upon the duration of the disease—the earlier the case the greater the number of species found. In several cases a streptococcus was almost overlooked by reason of the small size of the colonies. In a small proportion the colon bacillus alone was found. The ease with which some organisms—especially the streptococcus—may be overlooked in the presence of one growing so luxuriantly as the colon bacillus, must be apparent, in all methods of isolation. The point is that we find the colon bacillus in purulent inflammations, and in many cases find it alone.

As above stated, it can produce pathological conditions, so for the present we must abide by our findings.

The most important accompaniment of suppurative cholangitis is a general infection, said to be always fatal.

Endocarditis is frequent, and Netter and Martha have found the same organisms on the heart valves as in the bile ducts. Labadie-Lagrave speaks of purulent meningitis; Courvoissier, of pylephlebi-

tis, phlebitis of hepatic vein, thrombosis of a branch of the hepatic artery with infarction, and perihepatitis with adhesion to surrounding viscera.

The abscesses secondary to cholangitis may vary from the size of a pea to that of a child's head (Frerichs). One the size of a hen's egg was present in a case complicating typhoid fever (Klebs). These may travel in almost any direction, and have been known to open into the peritoneum, stomach, colon, or duodenum, through the diaphragm into the pleural cavity, and into the abdominal wall. Of the cases due to lumbricoid worms, one opened into the lung, and another formed an abdominal fistula through which a worm was discharged.

In conclusion, I desire to thank Dr. H. B. Anderson for the privilege of studying this case.

Clinical Notes.

A CONTRAST OF TWO CASES OF TUBERCULAR PLEURISY WITH EFFUSION.*

By H. H. Oldright, M. B. Tor.,
Assistant-Surgeon St. Michael's Hospital, Toronto.

THE two cases of pleurisy which I will describe are of interest both on account of the individual peculiarities of each, and from a comparison of the physical signs, the symptoms and the duration of the pathological processes.

In the first case, one of fibrinous pleurisy, the patient, an hostler, was exposed to cold and wet, causing through the reflex nervous arc a point of weak resistance to the bacillus tuberculosis or the pneumococcus; the former, I presume, as it is the most common cause, according to Strumpell, and also because there was no appreciable consolidation of the lung. The peculiarity in this case was that the vocal fremitus, bronchial breathing and vocal resonance could be felt and heard through the effusion which extended from the right nipple level to the base, and this may be accounted for by the compression of the lung as far as the bronchus, and the density of the fibrinous effusion, which clotted on being withdrawn, forming a firm greenish-colored jelly. The amount of fluid withdrawn was about three pints. This dense effusion transmitted the fremitus and breath sounds as readily as a consolidated lung.

We may eliminate pneumonia for two reasons, firstly the apex beat was displaced to the left of the left nipple line, and secondly, the amount of effusion would compress the lung up to the nipple level where the absolutely flat percussion note below this level ended, and the tympanitic zone and normal resonance above over the upper lobe began.

In the second case with serous effusion the peculiarity was in the paralysis of the right serratus magnus muscle, which came on some weeks after the last aspiration. (See page 153.)

*Read before the Toronto Medical Society.

The points of note in comparing these two cases are that in the first with the fibrinous effusion there was great pain, which was absent with the serous effusion, there was no return of the fibrinous effusion, probably due to immediate adhesion of the pleural surfaces, while the other required four aspirations, and lastly the difference in the physical signs.

CASE NO. I.	CASE NO. II.
HOSTLER.	CLERK.
Muscular system well developed.	Muscular system well developed.
Fibrinous pleurisy.	Serous pleurisy.
Intense pain.	No pain.
Profuse sweating.	No sweating.
Appetite lost, markedly.	Loss not so marked.
Tapping on sixteenth day.	Tappings on tenth day; 2nd, ten days later; 3rd, seventeen days later; 4th, three weeks later.
Examination right side.	Examination right side.
1. Vocal resonance, bronchial breathing heard and vocal fremitus felt through the fluid from nipple to base of lung.	1. All breathing sounds absent to nipple level.
2. Apex beat displaced beyond left nipple.	2. Apex beat displaced beyond left nipple line.
3. Percussion note flat.	3. Percussion note flat.
4. Cough.	4. Cough.
5. Œdema of left lung slight. Relieved by tapping, and pulse fell from 130 to normal.	5. Œdema somewhat relieved by tapping and pulse normal after.
6. Fluid greenish, coagulated when withdrawn.	6. Fluid, straw-colored in first two tappings, and slightly tinged with blood in the last two. No coagulation in first, slight coagulation in last two.
7. No return, and rales disappeared in left lung.	7. Rales persisting, but improving. also dulness over left base and hindered movement of chest in same region improving, due to infiltration.
8. Duration of effusion two weeks.	8. Duration of effusions two months.
9. Dulness from deposit of fibrin most marked.	9. Persistent dulness on right side from thickening of pleura. Paralysis of respiratory nerve of Bell, long thoracic. Serratus paralysis.

Case No. II.: Noticed paralysis of right serratus first three months after onset of illness and six weeks after last tapping. He had difficulty in raising right arm above the shoulder level without help from the left, and had to grasp something to maintain the elevated position with ease. Right serratus magnus atrophied. Scapula winged. All other muscles normal. My first impression was that mentioned by Treves, namely, that the lower angle of the scapula had escaped from under the latissimus dorsi. Strumpell

says it is common, and generally with porters and soldiers. Aetiology-trauma, cold (rheumatic), infectious diseases (typhoid), progressive muscular atrophy (one symptom.)

Prognosis—recovery tedious, several months—some cases incurable.

Treatment—electricity.

In the discussion following this paper the members of the Society thought that a neuritis, resulting from puncture of the nerve, could

be eliminated, as the lesion must have been higher up than the seventh rib. Dr. H. Parsons suggested that there may have been extension of inflammation from the pleura, causing a neuritis in the long thoracic, analogous to that producing mastitis in cases of pleurisy, and this would seem to be the best explanation.

Case No. I. has entirely recovered from a slight cough following the pleurisy.

Case No. II. has fibroid phthisis and has gone south to Asheville, N. Carolina, from which place, I am sanguine, he will return recovered.

Progress of Medicine.

OBSTETRICS

IN CHARGE OF

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AND

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ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

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Hyperemesis Gravidarum and Salt in Food.

Antonchevitch (*La Gynécologie*, October 15th, 1897) sees a strict homology between uncontrollable vomiting of pregnancy, and vomiting from which animals suffer when deprived of salt in their food, being fed on albumen artificially deprived, as much as possible, of potassium and sodium salts. He has, therefore, dieted women suffering from hyperemesis gravidarum by taking care that their food contains at least a full proportion of salts.—*British Medical Journal.*

Retained Portions of Placenta.

The indications for the removal of a small piece of placenta or membrane need not be a fœtid lochia, nor a temperature, nor a rapid pulse, which symptom complex is usually associated with a sapræmia, but a severe degree of after-pains, a subinvoluted uterus and a persistent bloody lochia is quite enough evidence to the careful observer to demand an exploration.

S. Marx.

The Hand in Obstetrics.

The hand as a dilating agent is the best obstetrical instrument at our disposal—better than Barnes' bags and the instruments which

have come to us from the French school. As a result of extended experience, I am still able to say that in ninety-eight per cent. of all cases, the woman being within six weeks of full term and under surgical anæsthesia, any man can dilate the cervix with his hand sufficiently to enter the uterus and extract the child.

EGBERT H. GRANDIN.

The use of the hand in obstetrics is of the utmost importance. For purposes of dilatation, examination and manipulation, the hand is the obstetrician's instrument.

C. A. VON RONDOLER.

OCCIPITO-POSTERIOR PRESENTATIONS.

In *occipito-posterior* presentations it is important to pass the hand into the vagina when the diagnosis is not clear; and the best landmark is the ear, the direction of the flab showing that of the occiput.

R. L. DICKINSON.

SEPSIS AND TRAUMATISM.

Is sepsis everything? Is traumatism nothing? What causes the death of the woman who perishes on the operating table or in the obstetric bed twenty-four hours after labor? Does anyone mean to say that within twenty-four hours germs have entered that woman's system and killed her? No! It is traumatism which has killed her and this traumatism we must avoid.

MALCOLM MCLEAN.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF

PRICE-BROWN, M.D.,

Laryngologist to Western Hospital ; Laryngologist to Protestant Orphans' Home.

Diagnostic Significance of Laryngeal Abductor Paralysis.

Sir Felix Semon (*Brit. Med. Jour.*, Jan. 1, 1898), in a lecture delivered at the National Hospital for the paralyzed and epileptic, gives us the result of his diligent and painstaking investigations upon this subject. After referring to the contentions among anatomists and pathologists of the present century, concerning the origin of the nerve supply of the abductors and adductors of the larynx, he gives a detailed statement of the conclusions derived from his own physiological and pathological investigations.

The motor nerve par excellence of the larynx is the recurrent laryngeal. Whether the entire motor supply has this origin or not he considers not definitely settled. Possibly some innervation may be derived from the spinal accessory. One point he lays stress upon —the fact that Risien Russell has succeeded in splitting up the recurrent laryngeal nerve throughout its peripheral length into three different bundles of fibres, one of which supplies the adductors, another the abductors, while from the third no motor effect can be produced in the larynx. Hence the fibres supplying the antagonistic groups of laryngeal muscles are differentiated throughout their course. Those which supply the abductors of the vocal cords are situated on the inner side of the recurrent laryngeal nerve.

Sir Felix takes issue with the idea usually taught in text-books, that the vocal cords, during respiration, make excursions synchronous with the respiratory movements of the thorax ; that is, they widen during inspiration and narrow during expiration. He claims, basing his conclusions on a great number of examinations, that in a large majority of cases, the isosceles triangle which the vocal cords form during breathing, varies little or nothing during the two phases of respiration.

He then makes a note of the difference between the "common respiratory position" of the vocal cords and the "cadaveric position." The width of the glottis in a healthy adult man during quiet respiration is 13½ millimetres; whereas after death the maximum width ever seen in man is only 6 millimetres, and in woman 5, the average in man being 5 and in woman 4.

The question arises, Why should there be so much difference between the physiological condition of respiration, in which neither abductors nor adductors are called into action, and the cadaveric position, in which the same sets of muscles are pathologically at rest?

The answer is that nature has endowed the abductor muscles with a tonus, by means of which the glottis is kept sufficiently open for ordinary breathing, which would not be the case in the cadaveric position. This tonus is produced by certain centripetal fibres, contained mainly but not exclusiveiy in the trunk of the pneumogastric, which are stimulated by the interchange of gases in the lungs during respiration. The impulse is carried by the fibres to the medulla, and from there transmitted through the recurrent laryngeal to the abductor muscles. Perhaps Risien Russell's third bundle of fibres perform this special tonic function.

Up to the year 1876 it was supposed that the abductor or adductor muscles might either of them become affected, from lesion of the nerve supply, to the exclusion of the opposite groups. And that in other cases the central lesion might be so general as to affect all the motor nerves of the larynx, inducing paresis of both abductors and adductors at the same time.

Since that period, opinions based on clinical research have undergone a material change. Now it is known that in paralysis of the larynx, the abductor muscle, the posterior crico-arytenoid, is always the one first affected; and that the term paralysis of the larynx, as usually applied, signifies paralysis of one or both abductor muscles; and that when paralysis of the adductors does occur, it is always secondary to primary paralysis of the abductors, except in cases where the lesion is complete at once, as in section of the recurrent nerve.

Semon summarizes this conclusion as follows: "Whilst there is not a single authenticated case on record in which it has been shown by post-mortem examination that in a slowly progressive organic lesion of the motor nerves of the larynx, the adductors had been primarily or exclusively affected; we are now in possession of quite a number of well observed cases demonstrating the opposite order of events."

The author adduces another curious fact, that although in general paralysis of the larynx, the abductors are always affected first, when recovery occurs, the adductors lead the way. The reason assigned is, that from some cause, still unknown, the abductors are much more vulnerable to nervous influence than the adductors. The truth of this conclusion is illustrated by a series of pathological facts.

The next point taken up is the effect of this abductor paralysis upon the vocal cord. In the first stage, the effect would be that while at rest, the affected cord would be in the cadaveric position, and that during phonation the adductor muscles would draw it to the mesial line. Consequently the voice would be normal and likewise the breathing owing to the wide dilation of the unaffected side.

Eventually the tension of the adductor muscles, having no resistance, would draw the cords permanently to the centre, making complete abductor paralysis of the affected side. Even here the voice would be normal, and the breathing but slightly, if at all, affected during ordinary respiration.

In cases where adductor paralysis follows that of the abductor muscle, the compensatory forces come into play, and the unaffected vocal cord, sweeping past the mesial line and joining its fellow, will admit of proper vocalization.

Consequently, as paralysis of the larynx is usually only unilateral, there is in these cases absolutely no sign which would draw attention to the larynx. When it does occur, it usually arises from some pathological condition extraneous to itself. Hence the importance of laryngoscopic examinations can scarcely be overestimated. Whenever a thoracic, a pharyngo-laryngeal, or a cerebral case is of that obscure nature that it cannot be readily diagnosed, laryngoscopic examination is certainly advisable, and in many cases imperative.

The author gives a long list of central and peripheral affections which may give rise to laryngeal paralysis, among which are tumors, aneurism of the aorta and thoracic arteries, tuberculosis, malignant decease.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

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One of the Evils of Incomplete Coitus.

Under the name of a cardiac neurosis of sexual origin, Kisch, of Prague (cited in the *Presse médicale* for July 10th), describes a set of symptoms that he has observed in certain nervous young women whose husbands made it a practice to withdraw just before the instant of ejaculation, leaving them over-excited and unsatisfied. The physiological tachycardia of coitus, he says, becomes particularly intense in such women, and assumes the form of very distressing palpitation which at first persists for some time after each incomplete copulation, and after a while occurs during the day, repeatedly and without appreciable cause. For a time this palpitation is the only manifestation of the neurosis, but soon the clinical picture is completed by a feeling of anguish, headache, vertigo, syncope, and general weakness. The women are depressed and irritable; they weep on the slightest occasion, and take a gloomy view of life. The appetite is impaired, digestion becomes difficult, and they are constipated. The pulse is small, soft, and accelerated, often intermittent and arrhythmical. The arteries, however, are supple, and auscultation of the heart discloses nothing abnormal. All these symptoms will disappear as by enchantment when the practice on which they depend is given up.—*N. Y. Medical Journal.*

[Note.—We do not recall any cases as severe as those related above, but have seen many cases of nervous disturbance produced by the same cause. We have seen severe nervous, cardiac, and gastric symptoms produced in the male from the identical cause. Gastric disturbances are quite common in those persons who are guilty of abnormal or incomplete sexual indulgence. In one case that we recall a very intense exfoliative enteritis was developed subsequent to gastric disturbance from the above cause.—E. E. K.]

The Treatment of Gonorrhea with a New Silver Preparation, Protargal: Prolonged Injection.

Protargal (by Prof. A. Neisser, Breslau *Dermatologisches Centralblatt, October, 1897*), is a silver-protein compound containing 8.3 per cent. of the metal. It has the peculiar property that it is not precipitated by albumen, or diluted hydrochloric acid. This property is of importance, inasmuch as it permits of a greater penetration into the tissues than can be obtained with the other silver salts.

Prof. Neisser looks upon protargal as a valuable preparation in the treatment of gonorrhea. He has never had such uniform, good, sure, and even rapid results as since the use of this medicament. He begins with a 0.25 per cent. solution and increases rapidly to 0.50—1.00 per cent. concentration. The injection is to be used thrice daily, the fluid, being retained the first two times for five minutes and the third time for thirty minutes. The author lays stress upon the value of prolonged injection.

[Note.—We have been unable to procure protargal in this country, but the treatment by the silver compounds that do precipitate the chloride, nor coagulate albumen, have given us most gratifying results. Argonin is better than argentamine. We hope soon to be able to try protargal and will note the results.]

Sources and Diagnosis of Pyuria.

Dr. Lewis S. McMurtry, of Louisville, Kentucky, in discussing a paper read by Dr. Howard A. Kelly entitled as above, says: "In the first place the subject presented by the essayist is not so novel as might at first appear. Diseases of the female bladder and urinary tract have been studied for years by Bozeman, Emmet, Skene, Simon and Pawlik. The published results of these investigations have illuminated the subject so that the diagnosis and treatment of diseases of the female bladder and urinary tract are now upon a scientific basis. Exploration of the bladder by endoscopy and of the ureters by catheterization has been made practicable by Prof. Pawlik, and the method modified and popularized in this country by Dr. Kelly. As a diagnostic resource the method described by the essayist has certain definite value, but in my judgment, its scope in practical therapy is almost *nil*."

[Note.—As a diagnostic measure it is of value, but as a therapeutic measure, a delusion. We resort to these difficult and, in inexpert hands, dangerous proceedings with too much freedom.]

PEDIATRICS.

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P., Lond.,

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AND

W. J. GREIG, B.A., M.D.

Acute Abdominal Distension in Children.

Dr. George F. Still, Great Ormond Street Hospital, in Pediatrics for September 15th, 1897, says that this condition occurs as a late complication of diseases, not primarily attacking the digestive tract, and common with broncho-pneumonia. While not necessarily a fatal complication, it certainly is a dangerous one and often hastens death. He relates five cases, one of which recovered. He gives *post-mortem* report of the other four, showing in photograph first the abdominal distension, and second the visceral distension after opening the cavity. In one case the distension was in the ascending and transverse colon, in a second in the small intestines, and in the third in the stomach. It should be vigorously combated by position, passing tubes, and by creosote.

Gangrenous Vulvitis after Measles.

John A. Larrebee (Pediatrics, October 1st, 1897) in the course of an article on Measles reports one case of a babe in which this complication occurred. Other children in the house had measles but this babe had none of the usual symptoms. Depression of spirits, painful micturition, vulvo-vaginitis, death from sepsis in collapse in five days was the sequence of events. *Post-mortem* showed gangrene of the internal parts connected with the vagina up to the uterus; blebs with sloughing extended above the mons veneris. Different varieties of cocci resembling diplococci were found, but nothing pathogenic. This condition is described by Holt, as Gangrenous Vulvitis (noma).

Acute Arthritis and Epiphysitis of Infants and Young Children.

Frederic Eve, F.R.C.S. (in Pediatrics, October 15, 1897) has an article on this subject. He includes under this head arthritis secondary to osteo-myelitis at the extremity of the diaphysis, close to the epiphysial disc, arthritis secondary to a tubercular lesion in the bone at or near the epiphysis and suppurative arthritis due to a syphilitic epiphysitis.

The importance of early diagnosis is dwelt on and treatment given which is practically that of an abscess, gouging out the osseous lesion and applying pure carbolic acid.

Contributions of Bacteriology to Therapeutics. The Wesley M. Carpenter Lecture for 1897, by Wm. H. Park, (Pediatrics, Nov. '97.)

Tetanus antitoxin is very valuable as an immunizing agent against possible infection in cases of lacerated wounds or before serious operations in localities where tetanus is not infrequent. Its power in these cases is marvellous and certain. In acute cases developing within a week and running a course of 48 or 72 hours, as a treatment it is of very little value, but when the incubation is longer and the course more sub-acute benefit will follow its use. Along with the usual treatment it should be given in doses of 20-50 c.c. twice daily and beginning at the earliest possible moment.

Diphtheria.—The results of the antitoxin treatment are so well-known that the writer's conclusions need not be repeated.

Diseases due to the Pneumococcus.—These are pneumonia, pleurisy, pericarditis, endocarditis, abscess, cerebro-spinal meningitis, etc. The author does not think that the serum is of any practical value in the treatment of developed pneumococcus infection; nor does he think that it ever will be. It, however, is harmless and there is no objection to its use.

Streptococcus infections.—His conclusions are: The preparations of anti-streptococcic serum now on the market are either quite weak or entirely wanting in curative substances. We are justified in using serum only when it has been recently tested and shown to have some value in preventing infection in animals. The serum preserves its strength only for a short time.

Treatment of malignant tumors by the mixed streptococcic and prodigiosus toxins.—Only very temporary improvement follows their use in carcinoma. In spindle-celled sarcoma the result of the

treatment has been excellent, in rounded celled, not so good, and in melanotic, the action is the least marked.

New Tuberculin.—The benefit from this in treatment has not yet been estimated because the samples used have been found to be contaminated. In some vials living and virulent bacilli of tuberculosis were found, which when injected into animals caused tuberculosis.

Hydrophobia.—The treatment for this disease is still sub-judice, though it is claimed that the percentage of cases developing hydrophobia after bites from rabid animals is very much less in those treated than in those not. A few cases have, however, developed the disease while under the full influence of the serum.

Altogether the article is valuable.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

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ASSISTED BY

J. W. SMUCK, M.D.

Report of Provincial Board of Health for January, 1898.

Monthly Report issued by the Provincial Board of Health, showing the deaths from contagious diseases in the Province as reported to the Registrar-General by the Division Registrars throughout the Province for the month of January, 1898.

Total population of the Province, 2,263,492. Total population reporting, 1,536,825, or 67%.

	Population.	No. of deaths and rate per 1,000 per annum.						
		Scarlatina	Diphtheria.	Measles.	Whooping-Cough.	Typhoid Fever.	Tubercu-losis.	Total.
Cities reporting. 13 (100%)	432,675	4 (0.1)	15 (0.4)	2 (0.05)	3 (0.08)	5 (0.1)	62 (1.7)	91
Towns and villages, 236. Reporting. 187 (80%)	343,572	3 (0.1)	7 (0.2)	0	0	3	27 (0.9)	40
Townships 496. Reporting, 382 (77%).	760,578	9 (0.1)	29 (0.4)	2 (0.03)	5 (0.08)	5 (0.08)	57 (0.9)	107
	1,536,825 (67%)	16 (0.1)	51 (0.4)	4 (0.03)	8 (0.06)	13 (0.01)	146 (1.1)	238

Soil Disturbance and Malarial Fever.

The Indian Medical Record for December 16th contains an article by Dr. R. R. H. Moore, of Jalapahar, Darjeeling, on this subject. Disturbance of the soil, he says, has come to be regarded

as a frequent cause of malarial fever. In the extensive construction of canals and railroads frequent outbreaks of malarial fever occur, but is it not more likely that the cause is the waterlogged condition of the soil due to the subsoil drainage being interfered with, and not to the soil disturbance? Dr. Moore cites two instances of outbreaks of malarial fever occurring in France, reported by Dr. Botre and Dr. Evard, said to be caused by the extensive disturbance of the soil in constructing railways.

When agricultural colonies are founded in Algiers these outbreaks occur. M. Armand, in his very able work, *L'Algérie Médicale*, explains this as being due to the hardships endured from defective food, less refreshing sleep, exposure, more continued and more direct, the vicissitudes of the climate, to which the rising colony is exposed during the ednemio-epidemic season.

"Considering that the fact of being in camp all the summer has a deteriorating effect upon the health of the men, even when no work is done, how much more will the effect be felt, when all the fatigue attending the establishment of a colony has to be encountered!"

"The work of installation and construction does not involve as much disturbance of the soil as the subsequent tillage of the land, yet it is during the first summer that the state of the men's health is least satisfactory."

The same statement applies to the troops in the early days of Hong-Kong, and as in Algiers, the greatest amount of fever did not correspond with the greatest amount of soil disturbance, a point indispensable if the two things are to stand in the relation of cause and effect, while in all cases the men were living under conditions of great exposure and badly housed.

There are, then, three distinct classes in which all the cases where soil disturbance has been accused of causing malarial fever, may be placed:

1. Where the disturbance of the soil has interfered with subsoil drainage and caused a marsh or an allied condition.

2. Where outbreaks of fever have been co-incident with works executed in the soil, but not due to the simple disturbance of the soil.

3. Where malarial fever has been caused by a specific poison, released and brought into evidence by the breaking up of the soil.

Of cases falling in the first category there are plenty, but Dr. Moore says it is a misnomer to speak of them as caused by soil disturbance.

Of the second class there are also plenty; they belong to the

type of a gentleman contracting the fever by digging in his garden. These cases are valueless.

That malarial fever is caused in the manner specified in the third category there is not sufficient evidence to show.

Disinfection by Formaldehyde Vapor.

Dr. Hans Aronson (*Zeitschrift fur Hygiene und Infections Krankheiten*, June, 1897) summarizes investigations to date upon the antiseptic properties of formaldehyde. Various methods of disinfection by utilizing the penetrating powers of formaldehyde gas upon a large scale have been proposed. Aronson finds most of them objectionable; including in this category all attempts at vaporization by means of heat from commercial solutions of formaldehyde in water, or from solutions in methylated alcohol, and attempts to develop the gas directly by heat applied to wood alcohol in lamps of various devices.

Of all methods he prefers that of Schering, which utilizes the solid polymerized formaldehyde (paraformaldehyde or paraform) in the shape of pastils weighing one gramme each. These being exposed to heat in lamps of proper construction, the heated gases of combustion convert the paraformaldehyde again into formaldehyde gas, which becomes thoroughly mixed with them, and with them is distributed into all portions of the place to be disinfected; the necessary moisture being likewise supplied by the combustion. In a room of about 100 cubic metres (3,500 cubic feet) content (25 feet x 13 feet x 10¾ feet), he placed test objects at different levels. The microbes used were staphylococcus, streptococcus, bacillus pyocyaneus, typhoid, diphtheria, and tubercle bacilli and anthrax spores. It was found that one lamp containing 100 pastils (one pastil per cubic metre—35 cubic feet) was sufficient to destroy all germs but anthrax spores. For this 200 pastils sufficed.

It made no difference where the test objects were placed or through how many thicknesses of material the vapor had to penetrate. Even the scrapings of dust were sterile. The necessary number of pastils were placed in the apparatus, the lamp lighted, and the room closed for twenty-four hours. A strong odor of formaldehyde perceived on entering was quickly dissipated by opening the windows.

Editorials.

NEW EMERGENCY HOSPITAL IN TORONTO.

THE trustees of the Toronto General Hospital have decided to establish a branch, which will be known as an Emergency Hospital, in the southern portion of the city. A great portion of the most serious accidents occur in the vicinity of the railways and neighboring manufacturing establishments, and the hospital authorities desire to have a branch in that locality where people suffering from accidents can be admitted and temporarily treated. Dr. Charles O'Reilly has recently visited New York and Buffalo and investigated the systems which prevail in the Emergency Hospitals in those cities. The building selected for Toronto's new Emergency is admirably situated on Bay street, a few doors north of King street. No better situation for the purposes intended could possibly be chosen. The necessary alterations to the building are now being made, and will be completed in a short time.

DOCTORS IN THE ONTARIO LEGISLATURE.

WE are somewhat disappointed with the results of the recent elections as far as the medical candidates were concerned. There were nineteen physicians in the field ; and, of these, we had hoped that at least one-half would be successful. According to the returns at the time of writing we find that only seven have been elected, as follows : Drs. Barr, Dufferin ; Bridgeland, Muskoka ; Jamieson, South Grey ; Jessop, Lincoln ; McKay, South Oxford ; Lackner, North Waterloo ; Pyne, Toronto. The following were defeated : Drs. Fell, East Algoma ; Mitchell, West Durham ; Hall, West Kent ; McLeay, East Lambton ; Preston, North Lanark ; Meacham, Lennox ; McWilliams, East Middlesex ; Willoughby, East Northumberland ; Clemens, North Waterloo ;

Coughlin, East Wellington; Spence, West Toronto; McKay, Victoria West.

If we classify them according to politics, we find twelve Conservatives: Drs. Barr, Jamieson, Jessop, Lackner, Pyne (returned), Fell, Hall, McLeay, Preston, Meacham, Willoughby, Coughlin (defeated), and seven Liberals: McKay, Bridgeland (returned), Mitchell, McWilliams, Clemens, Spence, McKay (defeated). Thus it will be seen that of twelve Conservatives five were elected, and of seven Liberals two were successful.

There were in the last Parliament seven physicians; and, of these, only one, Dr. McKay of Oxford, will sit in the new House. Of the remaining six, two, Drs. Baxter and Ryerson, did not stand for re-election; while four, Drs. McKay of West Victoria, Meacham, Preston and Willoughby, were defeated. Of the seven in the last House, there were four Conservatives and three Liberals; of the seven in the new House, there will be five Conservatives and two Liberals.

From a professional point of view the loss of such men as Baxter, Ryerson, Willoughby and Preston is serious. On many occasions they did good work in defending us from unwarranted attacks of free-traders and free-booters who desired to destroy certain safeguards which had been erected in the interests both of the public and the profession. Many a time has McKay of Woodstock proved himself a sturdy and worthy champion of equity and justice in things medical. Right glad are we to know that he is remaining in Parliament.

Under the circumstances, we consider it extremely fortunate that Dr. Pyne has been elected. His intimate knowledge of medical matters in Ontario, combined with his good judgment and (that rare virtue)common sense, make him eminently fit to represent our profession in the Provincial Parliament. He will undoubtedly occupy a leading position in his party, and his political friends expect that he will be a member of the new Government which is to be formed in the near future. Others think that Dr. McKay will soon be made a member of the old Government, which may exist for several more months. Without showing now any preference, we desire to say we hope it will be one or the other. Apart from ordinary provincial politics we may add that, as far as things purely medical go, McKay and Pyne will make a fine team; and we have every reason to believe that they will have the hearty co-operation of Barr, Bridgeland, Jamieson, Jessop and Lackner, if called upon to fight any battles for the profession.

THE REEVE SCHOLARSHIP IN MEDICAL SCIENCE.

DR. R. A. REEVE has donated a sum of money to the University of Toronto for the purpose of providing a Scholarship of the value of $250, to be awarded annually for four years. The Scholarship is designed to foster the spirit of original research and to promote the utilizing of the Laboratories of the University for that purpose.

The conditions on which the Scholarship will be awarded are as follows:

The Scholarship will be awarded to the candidate who shall have gained the highest standing at the Final Examination in Medicine in the University of Toronto in the following subjects: Medicine and Clinical Medicine, Surgery and Clinical Surgery, Obstetrics, Pathology.

The candidate shall agree to devote himself during the next ensuing year, under the direction of the Medical Faculty, to research work in the Physiological or Pathological Laboratory of the University, and also to act as Laboratory Assistant.

A report of the research, when completed, is to be given to the University, whose property it shall become; and it shall be published at the discretion of the University Council.

The Scholarship is to be paid in two portions, one-half on October 1st and one-half on February 1st.

The winner of the George Brown Memorial Scholarship shall not be eligible.

THE INTERNATIONAL ASSOCIATION OF RAILWAY SURGEONS.

THE next meeting of this association will be held in Toronto, July, 6th, 7th and 8th, 1898. Dr. Bruce L. Riordan, who is chairman of the Committee of Management, is working very actively in the interests of the meeting, which, it is expected, will be a large one—between 500 and 600, some say. The society has a very large membership composed of railway surgeons in the United States, Canada and Mexico. It is said that every railroad in North America will be represented by its official surgeon ro by proxy at the coming meeting. During the past four years the regular annual meetings were held in Chicago, St. Louis, Denver and Galveston. Among those who have been honored in the association are Dr. James Thorburn, of Toronto, who is a past president; Dr. Riordan, of Toronto; Dr. Bruce Smith, of Hamilton, and the late Dr. E. A.

McGammon, who are past vice-presidents, and Dr. Hutchinson, of Montreal, who is now first vice-president.

A deputation, composed of Drs. Riordan, Pyne and Thorburn, waited on the Board of Control of the Toronto City Council and asked for the co-operation of that body in receiving and entertaining the visitors. We understand that a large number of the profession in Toronto and surrounding country have agreed to assist the local committee in making the necessary arrangements for the meeting, which is likely to be the largest medical gathering ever held in Ontario.

It is expected that there will be a formal reception on the first evening when the Lieutenant-Governor, Mayor Shaw, and others will welcome the visitors. The President will then deliver the annual address. On the second or third day of the meeting the committee of arrangements expect to take the members out on a steamer for a short sail, after which they will attend a garden party on the grounds of the Royal Canadian Yacht Club. On the day following the meeting it is hoped that a special train will be placed at the disposal of members to bring them to Gravenhurst, where steamers will be prepared to take them for a trip on some of the Muskoka lakes.

LEPROSY IN THE HAWAIIAN ISLANDS.

WE find a very interesting article in *The Cosmopolitan*, for March, entitled "Shall we annex Leprosy?" That most loathsome of all diseases, leprosy, is prevalent in the Hawaiian Islands to such an extent that it is estimated that about five per cent. of all the inhabitants are lepers. Efforts have been made to arouse among the natives some intelligent appreciation of the importance of using mean to prevent contagion, but, thus far, without effect. The writer in the article referred to says: "They will smoke the pipe of the leper, eat poi from his calabash, sleep in his bed, and wear his clothes. They become neither disgusted with his distorted and swollen features, nor afraid of becoming infected with the disease. They seem perfectly indifferent to the risk of contagion."

The Hawaiians, in 1865, took certain steps towards centralization and separation of leprosy, and empowered the Board of Health to seize the victims of the disease and remove them to certain leper settlements, of which the largest is the town of Kalaupapa, on the north coast of Molokai. With reference to the

collection of the victims we are told: "The woe of those who were taken, the dismay of those who were left and the agonized partings when friends clung to the swollen limbs and kissed the glistering bloated faces of those who were exiled from them forever, formed a scene which, once witnessed, was never to be forgotten; and yet it is still a common one in the Islands. None ever returns from that home of hideous disease and slow-coming death. It is a community of doomed beings, socially dead * * condemned to watch the repulsive steps by which their fellows go down to a loathsome death, knowing that they too must pass by the same way."

It is quite probable that much of the leprosy which exists in Canada and the United States has come from these islands. We have a good right, therefore, to take considerable interest in the steps which are being taken to enforce the laws which were enacted in 1865. For many years so many of the officers connected with the Board of Health were natives having no respect for the laws that the Government physician generally found it impossible to apprehend the lepers until they were too bad to be removed. In 1887, the Government took steps towards a more rigid enforcement of the laws, appointing a new physician, and replacing native officers by white sheriffs. The efforts of the Board of Health under the new regime have been much more effectual in the way of segregation.

The fourteen hundred lepers on Molokai "compose a regularly organized community. They have a court with a leprous judge, a store with a leper keeper, leper officials, hospitals with many leper nurses (some of them are not), a school with a leper teacher, and a church with a leper pastor. Their marriage laws are much like those of other communities, and there are forty children among them who have leprous parents, yet show no signs of the dread disease themselves."

Meetings of Medical Societies.

TORONTO CLINICAL SOCIETY.

THE regular meeting of the society was held on the 10th of March in St. George's Hall.

Dr. Albert A. Macdonald, president, occupied the chair.

There were present the following fellows: W. H. B. Aikins, G. S. Ryerson, Allan Baines, J. A. Temple, Edmund E. King, Albert A. Macdonald, Harold Parsons, Herbert Bruce, Elliot Brown, George A. Peters, Bertram Spencer, Alton Garratt, George Bingham, Geoffrey Boyd, Charles Trow.

The minutes of the last meeting were read and adopted.

SYNDACTYLISM.

Dr. W. H. B. Aikins presented a case showing the above condition in a man aged thirty-two. The fingers involved were the ring and middle of each hand. The patient had a cousin with a similar deformity.

Dr. George A. Peters presented a patient who had recovered from a compound fracture of the skull with loss of brain substance, with the following history: H. McM., æt. eight years, was admitted to hospital September, 1897, with a history of having been injured through being knocked down by a running horse. He reached the hospital two hours after the accident. On examination a wound about ½ inch long was found on the right side of the head. Its exact situation was ½ inch from the middle line and ½ inch in front of a line dropped vertically through the external auditory meatus.

Brain substance could be seen oozing from the wound, and pulsation could be detected; a deep depression in the vault of the cranium could be felt subtending the wound. He was conscious but somewhat somnolent, only rousing on being spoken to sharply or loudly. So far as could be learned he had never completey lost consciousness. There was complete paralysis of the left arm. The left leg and face retained power of movement.

The diagnosis of compound depressed fracture of the outer area having been made, preparations were made to raise the depressed bone. Guarding the actual wound with a compress soaked in 1—20 ac. carbolic, the whole scalp was shaved and disinfected in the usual way.

Operation.—A crescentic incision, convexity upwards, with a radius of 1½ inches, was made so as to include the wound, and the scalp over the whole of the depressed area was raised.

The depression was found to be oval in shape and about 1½ inches in its longest diameter. It was outlined at its margin almost all round by a fissured fracture of the outer table, and from this fissure numerous lines radiated to the centre, which was about a half inch below the general surface of the skull. There was a small amount of brain substance oozing from the centre of the depression. One of the small triangular pieces of bone was removed, and through the opening thus produced the remaining fragments were sprung back to their normal level. The fragment first removed was then replaced. The whole wound was then closed by horsehair sutures, a small drain of iodoform gauze being placed in the original wound.

The temperature the next morning rose to 102⅕ and pulse to 124. By night the register was 101⅘ and 114. Next morning 98 and 94. The subsequent history showed rapid recovery. The wound healed throughout by first intention, but the paralysis of the arm was recovered from very slowly. In about one month, however, all the motions were recovered except extension of the wrist and of thumb and fingers, and these motions are still imperfect, though gaining slowly.

The flexors of the hand are also weak. At present he is able to extend the wrist while the fingers are flexed, or to extend the fingers while the wrist remains flexed; but not to perform both movements at once. The reason for this apparently is that the extensora are incapable of successfully overcoming the tonic contractions of the flexors, while the latter are put upon the stretch by extending both the wrist and fingers.

The treatment has consisted in exercises, in voluntary movements, massage, electricity, and the functions are still slowly improving.

It is evident that the portion of the cortex that was destroyed is the area which normally presides over the movements of extension of the wrist and fingers. Horsley and others have shown that while there are certain well-defined areas which control certain movements, there are frequently outlying areas which seem to have a subsidiary

influence, and may become functionally in the event of destruction of the main centres. In this case it is to be hoped that these subsidiary centres may prove adequate to the performance of the duties thrust upon them by the destruction of the main centre. This patient has youth in his favor, and it is certain that the powers of adaptability are greater in immature than in fully matured brains.

In the meantime it is important to maintain the nutrition of the nerves and muscles by electricity and massage.

It was Hippocrates who said that no injury of the head is too trivial to be despised or too serious to be despaired of. Injuries to the brain produced by heavy blows or falls upon a broad surface are apt to be productive of a certain amount of bruising and laceration at the seat of injury, together with a greater amount of injury of the cortex at a point diametrically opposite. The explanation is that the blow starts a wave in the semi-fluid brain tissue which breaks violently against the bone opposite, thus producing a bruising and laceration of the cortex at that point with more or less bleeding. Between these two points there may be also traced a track of bruised brain tissue with minute punctiform hæmorrhages and molecular injury.

On the other hand injuries to the brain produced by momentary impact of an injuring agent of small area is much less likely to start such a wave, and consequently the injuries produced by sudden, violent blows are usually limited to laceration of the brain substance immediately beneath the part of the skull struck. Thus non-penetrating or glancing bullet wounds are said to produce the most typical localized cortical lesions. The case just cited is evidently one of localized injury, though we do not know exactly what the nature of the fracturing force was—probably the cork of a horse's shoe.

In regard to prognosis it must not be forgotten that in injury of this kind there occurs during the process of repair a soldering of the various membranes together. The dure also becomes densely adherent to the skull, and thus there is an anchoring of the brain at that part which in later years may be productive of headache, epileptiform convulsions or attacks of giddiness on sudden movement.

Dr. Peters presented a second patient upon whom he had performed a plastic operation to relieve cicatrical fixation of the thumb inflexion. The following was the history of the case :—

The thumb in this case was bound down by a very dense and deep cicatrix resulting from a deep suppurating wound in the thenar

eminence. The short flexor muscles seemed to have sloughed away and the skin was firmly bound down to the metacarpal bone and the annular ligament. The thumb was drawn inwards so that it lay across the middle of the palm, its tip pointing towards the little finger.

In the operation the cicatrix was divided freely; also the outer part of the contracted annular ligament. The anterior and lateral ligaments of the metacarpo-phalanygeal joint were also divided, as well as the remains of the short muscles of the thumb. The long flexor tendon was left undivided but was dissected out of the cicatrix so that it moved freely.

The wound thus made on the palmar aspect of the thumb was filled in by dissecting up a flap from the dorsum. This flap was one and a-half inches long by three-quarters of an inch wide, and its base was adjacent to the wound in the palm. Care was taken to maintain a good thickness to this flap so as to insure its vitality. Having been very freely dissected up, the flap was swung from the back to the front of the thumb and stitched into place by horsehair sutures.

The wound on the back was closed in the same way after very freely undermining its edges in all directions.

The wound was not dressed for six days and was found to have healed throughout by first intention.

FRACTURE OF THE MAXILLÆ.

Dr. George A. Bingham showed a boy under his care who had suffered from compound fracture of the superior and inferior maxillæ, the base of the skull, with extensive injury of the soft parts.

In a brief description of the case Dr. Bingham said:—I present this case more as a curiosity than anything else. Sometime in December this boy was riding a bicycle at a rapid rate along the devil strip with his head down. He came in contact with a butcher cart which was being driven at a rapid rate from the opposite direction; the shaft struck him in the face, crushing his nose and his eye out of sight, passing through the orbit, fracturing the superior maxillæ, fracturing the inferior maxillæ, fracturing the base of the skull, and carrying away a portion of the facial nerve. Dr. R. J. Wilson was called and at his request I operated on the patient the night of the injury. We first built up a nose, then brought the eye into position, adjusted the orbit and the fractured superior maxillæ and hard palate, stitching the soft parts over the hard palate, put the jaw in a splint, and got him in a fair condition. He was vomiting

blood freely. Those who saw him thought there was no hope for him, but the subsequent history shows that it is hard to kill a boy.

Occasionally now a small portion of bone comes from the right ear. Owing to the damage done to the facial nerve on the right side, the function of the muscles on that side is gone and gives the face the appearance it has. The vision of the injured eye now is very good.

Dr. Bingham presented a second patient with the following history: The patient, a little girl, on January 23rd, 1896, fell, while playing, and scratched the skin over the right patella. On the same day she got her feet wet. The wound was not attended to. Five days after Dr. Powell was called in; he noted a flushed area below the patella on the upper end of the tibia, which was very tender. He considered the case one of osteomyelitis, and sent her to the hospital under the care of the speaker. On the 29th he (Dr. Bingham) trephined into the epiphysis of the tibia and found a pus cavity which he scraped out. Healing took place readily. Three days after the patient began to complain of pain in the lower epiphysis of the right humerus. Incision was made and drainage, healing following. The next point attacked was the upper epiphysis of the same bone. Similar operation was done. The next bone attacked was the right tibia at its lower end. Since that time until now (about two years) the patient has returned periodically to the hospital for treatment, undergone operation on some bone and recovered. On one occasion a considerable portion of the right clavicle was removed; at another time the scapula on one side. Few of the long bones had escaped. A considerable portion of ribs had been removed. The speaker thought that the disease would be sure to reappear. The patient had been put on tonic treatment, and she had the best hygienic care. The last bone affected was one of the ribs on the left side. The wound of this operation was not yet quite healed.

Dr. A. H. Garratt then reported a case, the salient points of which are as follows:

OPERATION FOR PENETRATING PISTOL WOUNDS OF THE ABDOMEN WITH PERFORATION OF THE STOMACH.

On January 10, 1898, at 6 p.m., I was called to York street to see a case of pistol shot wounds of the abdomen in a woman thirty years of age. Upon my arrival I found that a quarter of an hour before the patient had been shot in two places with a thirty-two calibre revolver. The pistol had been discharged first from a dis-

tance of one foot, and the bullet had struck one inch to the right of the median line and three inches above Poupart's ligament. This bullet followed a subcutaneous course, and was afterward removed near the inferior iliac spine five and a half inches from the point of entrance. The second bullet struck two inches to the right of the median line and three inches above the umbilicus, and had been discharged from a distance of nine feet.

The patient complained of little pain, but was very much excited, having climbed an eight-foot fence, wrested the pistol from her husband and would-be murderer and shot a strange man in the thigh who tried to stop her on the street. I made a hurried examination, demonstrating with a probe that one bullet did not produce both wounds, and had the patient sent to St. Michael's Hospital under my care.

I visited my patient again at 8 p.m. and found her lying on her back with knees drawn up and suffering great pain all over the abdomen, although the house surgeon had given an eighth of a grain of morphine before my arrival. The pulse was 110 and the temperature 100°. The abdomen was markedly distended and the face anxious. I decided on laparotomy at once, and ordered one-quarter of a grain more of morphine while the preparations were being made. It was more than an hour before the patient was prepared and my assistants ready. Dr. J. N. E. Brown administered ether, and during the first stage of anæsthesia the patient vomited a pint of blood clots and food. I made my incision four inches in length in the median line above the umbilicus and over the track made by the second bullet through which the probe had passed.

On opening the peritoneum there was a sudden escape of gas leading Dr. Bingham, who assisted me, to suspect that my knife had wounded a knuckle of intestine. On careful search this was disproven.

The transverse colon was pushed down and the stomach brought up in the wound, and after a short search a perforation of its anterior wall was found; this I closed with nine Lembert sutures of fine silk and continued the search for a wound of exit. After going carefully over the stomach and neighboring organs and finding no other wound, the peritoneum in easy reach was cleansed with sponges wrung out of hot sterilized water and the abdominal wound closed with deep silk worm gut sutures including all the tissues. A strip of iodoform gauze was passed down the bullet track and brought out between the sutures. Iodoform was dusted over line of wound, and iodoform gauze, sterilized gauze and cotton wool completed the dressing, which was held in place with a cotton binder.

The first bullet near the iliac spine was now removed through a small incision and its track lightly packed with a narrow strip of iodoform gauze. I then ordered a search to be made in the vomited matter for the second bullet, but unfortunately it could not be found, and I am still in doubt as to its whereabouts.

Patient recovered from anæsthetic nicely but complained of a little pain all over abdomen.

The next day, Jan. 11th, was given nothing but hot water in drachm doses per mouth; had several attacks of vomiting.

On the following day, Jan. 12th, was given an ounce of beef tea per mouth and the mouth was frequently washed out with ice water; feeding by nutrient enemata was commenced, and there was no more vomiting. Patient still complained of tenderness over the abdomen.

The dressing was changed and shorter pieces of gauze inserted in bullet tracks.

From the 12th until the 16th patient was fed on nutrient enemata and steadily improved.

On the 16th feeding by the mouth was commenced and continued without ill effect.

On the 31st the stitches were removed and the wound was perfectly healed, the bullet tracks were also healed. Patient was allowed to sit up on Feb. 6th, and was placed on the regular hospital diet. This operation was not undertaken until symptoms indicating perforation of stomach or intestine showed themselves, thereby disproving the assertion of Dr. Parke of Scranton, Pa., in the New York *Medical Journal* of Jan. 15th, that at such time the operation was always too late.

Dr. George Peters said he was not certain whether or not one should not in these cases, when the history showed pretty clearly that the bullet was fired at close range, explore the wounds at once without waiting for symptoms. If the bullet were fired in a fairly direct way it would be almost sure to go through the abdominal wall. The risk of an exploratory incision was not great.

Dr. King pointed out that it was fortunate that the bullet had entered over the stomach instead of lower down, for the contents of that viscus had, no doubt, contributed to the stoppage of the course of the bullet. He agreed that in these cases operation should not be delayed.

Dr. Temple made some remarks on a case of carcinoma uteri. The patient was a woman who had entered the pavilion at the

General Hospital under his care. Her age was only twenty-eight, and she was the mother of four children. She was greatly emaciated. On examination he recognized a cancer of the body of the uterus, and the disease so far advanced that he could not offer the slightest hope by operation. The disease had involved the ureters and had caused hydro-nephrosis.

Dr. Harold Parsons read the post-mortem report made by Dr. H. B. Anderson, as follows:

Mrs. M. Aged twenty-eight. General emaciation. Subcutaneous fat scanty. Fundus uteri three inches above the symphysis pubis. The throracic and abdominal viscera were all examined but presented nothing special of note except as follows: Right ureter was three-quarter inches in diameter, being immensely distended with fluid. Right kidney was very pale in color. Weight six and a quarter ounces, and showed marked hydro-nephrosis. The opening of the ureter into the bladder was involved in the cancerous growth. Left ureter slightly enlarged. Left kidney pale and showed a lesser degree of hydro-nephrosis. Weight four ounces. The ulcerating cancerous mass involved the whole body of the uterus. The cervix was entirely destroyed. The growth involves the whole of the bladder, ulcerating through in the median line, producing a utero-vesicle fistula. The orifice of both ureters was involved in the growth. Below it extends into the upper part of the vagina, and behind into the adjacent parts of the rectum. (Bladder was cut through from in front).

Microscopic sections of the growth show the structure of a glandular cancer, adeno-carcinoma. The cancer evidently originated from the glandular epithelium, but whether those of the cervix or body of the uterus the microscopic examination would not determine.

Dr. Peters presented two astragali he had removed from a case of double club-foot upon which he had operated. He described the various incisions recommended for the operation.

Dr. G. S. Ryerson and Dr. B. Spencer were appointed a committee to act with committees from other societies in the consideration of the proposed academy of medicine.

The society then adjourned.

THE PATHOLOGICAL SOCIETY OF TORONTO.

THE regular meeting of the Pathological Society was held on February 26th, in the Biological Building, Dr. H. B. Anderson in the chair. Those present were: Drs. J. E. Graham, McPhedran, Bingham, Greig, Wm. Oldright, Wilson, Hamilton, Bruce, Silverthorne, Carveth, J. N. E. Brown, F. N. G. Starr, Peplar, Rudolf, Parsons.

The minutes of the previous meeting were taken as read and adopted.

Dr. G. Silverthorne read a paper on "Diseases of the Cornary Artery, and its effects," which will appear in next issue.

Dr. Bingham read a paper on

CANCER (?) OF ANTERIOR PILLAR OF FAUCES.

Mr. T., æt. 58, first noticed small growth on the anterior pillar of fauces in July, '97. This broke down some months later, and I saw him in November, '97, when there was an ulcerated surface the size of a ten cent piece. Potassium iodide was given until iodism was produced with no result as far as the ulcer was concerned. The ulceration, as you see, has extended to the palate and the tissues behind the faucial pillar. The submaxillary glands are enlarged and indurated. The patient complained of much pain at first, but of late this has almost entirely disappeared.

The patient has been a heavy smoker. Family and personal history as to disease is excellent.

Dr. H. B. Anderson, discussing Dr. Bingham's paper, said: "Microscopic examination of a piece of tissue from the anterior pillar of the fauces showed a great many vessels distended with blood and infiltration with polymorphonuclear leucocytes. There is some evidence of epithelial overgrowth, the cells also being altered in shape, but this might be secondary to the inflammatory condition present. Epithelioma of the anterior pillar of the fauces is very rare except when involved by extension from adjacent structures. The apparent improvement and the manner in which the trouble first showed itself in separate patches on the hard and soft palate and anterior pillar did not suggest malignancy."

Dr. Silverthorne, discussing Dr. Bingham's case: "It would appear that the growth could be inflammatory in origin from irritation of teeth. The fact of change in point of greatest intensity would be against epithelioma.

Dr. Wm. Oldright said: If one may speak as to the pathology of this case through a clinical expression of opinion, I would say that I would feel inclined to have that tooth removed and give large doses

of potassium iodide alternated with mercuric bichloride, before resorting to more heroic measures.

Dr. McPhedran: Potassium iodide must be given in very large doses. Iodism may be produced by a small dose and cease if a larger dose be given.

Operation even now would have to be very extensive.

Dr. Bruce advised early operation. Potassium iodide had had a chance.

Dr. Graham spoke of the work of Gilchrist with blastomyces in skin diseases. Could there be anything of the kind here?

Dr. Parsons referred to a recent abstract in *The British Medical Journal* regarding blastomyces in enlarged tonsils. In the case presented, the history of a primary swelling and pain so great in character was more that of an inflammatory condition than a new growth. He asked if there were a sinus leading to bone, such as found in necrosis.

Dr. Bingham, replying, said he thought the disease, if carcinomatous was very widespread and operation would be very extensive.

Dr. Graham, discussing Dr. Silverthorne's paper, thought thrombosis of the coronary arteries a subject of great interest. He referred to an instance in his practice, a case of septic endocarditis (Streptococcus). Patient while at stool was seized with dyspnœa and precordial distress. This occurred on a Saturday. Morphia relieved the distress and he slept well. Woke on Sunday morning in great pain, died on Monday. Post-mortem, a septic embolus was found in one coronary artery.

Dr. Graham asked as to the character of atheroma and its relation to arterio sclerosis. Extreme coronary arterio sclerosis in cases of death from other causes, was also spoken of. Also of the slowness of death in some cases of rupture of the heart. In wounds of the heart death may be slow.

Dr. Carveth referred to a case he presented two years ago to the society, in which sudden death took place, and on examination of the heart the coronary arteries were found to be almost obliterated, especially in their lower parts.

Dr. Greig referred to a case that he had reported at a previous meeting of this society, in which sudden death had occurred in a young woman aged twenty-eight years, and in which the post mortem discovered no possible cause of death, excepting a marked atheroma of both coronary arteries. He asked the question, why should this young woman die suddenly? The heart was small, with thin walls, evidently badly nourished. He referred to a suggestion made by

Welch at a meeting of this society some years ago of the possible existence of peculiarly sensitive areas in the heart wall, and so long as this area was nourished life would exist, and when it was deprived of its nutrition death ensued suddenly. He reasoned by analogy from the sensitive spots in the heart of the dog.

Dr. Greig also referred to the existence of an anatomical anastomosis between the coronary arteries as proved years ago by the experiments of Wickham Legg and S. West in London. Porter in a recent paper says that while this is true, yet for purposes of the circulation it need not be considered, because the heart beat is not sufficient to force the blood through the anastomising vessels. Another question broached by the speaker was the fact of sudden death occurring sometimes when only one coronary artery was blocked and in other cases not. Dr. Greig suggested the possibility of the anastomosis being freer in some individuals than in others, and thus an explanation of the above question.

Moved by Dr. Peplar, seconded by Dr. Oldright, that Dr. Oldright's paper be postponed to a subsequent meeting. Carried.

The other specimens were then presented.

CIRRHOSIS VENTRICULI.

Dr. Hamilton: These sections are from a specimen presented by Dr. Graham at the December meeting. It will be remembered that the stomach was very small, its cavity holding only about six ounces. The walls were very much thickened and very firm in consistence.

The sections present the following appearances:

The superficial epethelium of the mucosa has disappeared in places. The glandular structure has lost its regular arrangement. The tubules show an atypical ramification. The glands in some places have disappeared altogether. In others some dilated cystic forms are left. There is an abundant small celled infiltration in the interglandular spaces and formation of fibrous tissue, which in places has entirely taken the place of the gland structure and in others can be seen as a network around the tubules which remain. The submucosa and muscular coats present the same infiltration and fibrous tissue formation. There is also the same condition very marked in the serous coat.

Dr. Graham: The literature of this condition is very scarce, not mentioned at all by many. Dr. Welch doubts its existence. Klebs and Fagge briefly refer to it.

Dr. Rudolf in discussion said the stomach in this case may have been a small one, or at least have been small for many years.

The patient reached the age of 72 years in comparative health. Dr. Carl Schlatter of Zurich lately excised completely a stomach of a patient who had cancer of stomach. He joined the œsophagus to the jejunum ten inches beyond the duodenum. She was able to eat all kinds of food and put on two pounds a week. This shows that the stomach is not necessary to perfect digestion and Dr. Graham's case supported this view. Dogs have lived for years without stomachs.

Dr. F. N. G. Starr showed an epithelioma of the auricle he had removed from the ear of a man aged 58. He also presented a photograph of the growth before removal.

Until this case had come under his observation he had never seen a case, but within a week after this case he assisted Mr. Cameron to remove one from the base of the lobule of the ear of a man aged 82, and had been consulted by a third in an old man aged 84 years, at the outdoor department of the General Hospital. This one appeared to spring from the floor of the concha, and was a large fungating mass. He regretted having been unable to secure either the specimen or a photograph.

The condition, though not an unknown one, is certainly not a common one, and it seemed odd that all his experience of the disease to date should be limited to a week.

LONDON MEDICAL ASSOCIATION.

THE regular meeting of the London Medical Association was held at the Medical College on Monday evening, Jan. 10th, 1898. Present—Dr. F. R. Eccles, president, in the chair, and Drs. Moorehouse, McArthur, Graham, Weekes, Hodge, Wishart, H. A. and W. J. Stevenson, Hotson, Roome, Meek, Bayly, Owens, Thomson, Macdonald and English, and several students.

The president, Dr. Eccles, thanked the members for electing him to the president's chair for the ensuing year, and after a few terse remarks, proceeded with the regular business.

Minutes of previous meeting read and approved.

On motion of Drs. Roome and Hodge, Dr. N. R. Henderson was elected a member.

Dr. H. A. Stevenson exhibited the following interesting specimens:—

1. Hernial Sac with concretion in the bottom thereof.
2. Section of necrosed bone removed from femur.
3. A mulberry calculus weighing four ounces. Fifteen years

previously patient had an attack of renal colic and had no further symptoms until two days before operation.

4. Microscopical sections of several diseased vermiform appendices.

HEPATIC CALCULI.

Dr. English exhibited specimens of hepatic calculi removed by Dr. Eccles, and gave a brief history of the case.

APPENDICITIS.

Dr. Eccles showed specimens of two cases of appendicitis recently operated upon.

As a continuation of the discussion of the previous meeting on appendicitis, Dr. Hodge read an interesting paper on its medical treatment. After briefly describing the symptoms of an ordinary mild attack, he said he would in those cases give a mild saline aperient or enema, then morphia hypodermically or opium by mouth in amounts quite sufficient to relieve pain ; also intestinal antiseptics such as salol and bismuth with one-tenth grain dose of calomel, low diet and if vomiting, use the stomach tube.

During the discussion which followed, Dr. Moorehouse did not favor purgative treatment, but gave opium in large doses "to keep the bowels in splints." Had seen ill results from saline given by mouth or rectum. Dr. Meek did not agree with the statement of some authorities who say that appendices are more liable to become inflamed when the opening into the bowel is large. His line of treatment was immediatel axatives, as there is much more danger of infection if the bowel be loaded than otherwise. Give morphine with care.

Dr. McArthur used saline or calomel, but no opiates, and consulted a surgeon early. Dr. Eccles did not approve of the passage of a stomach tube. Drs. Roome, Graham, H. A. and W. J. Stevenson took part in the discussion and Drs. Wishart and Hodge replied.

All the surgeons present were agreed that cases that were suitable for operation should be diagnosed as such if possible by the thirty-sixth hour, as the death rate could be so much decreased in these cases by early operation.

The medical men were not united as what treatment should be carried out in medical cases.

The meeting adjourned at 10.25 p.m.

The next regular meeting of the Association was held on the evening of Feb. 14th. Dr. F. R. Eccles, president, occupied the

chair, and there were present Drs. Hodge, Meek, Wishart, Ferguson, W. J. Stevenson, Thomson, English, McArthur, Moorehouse and several students.

CIRRHOSIS VENTRICULI.

After reading and approval of minutes, Dr. W. J. Stevenson exhibited the stomach of a female aged 75, who had been affected with cirrhosis ventriculi, and gave full notes of the case. Had a history of vomiting for a year with no pain nor rise of temperature. Had subsisted entirely on koumiss taken in minute quantities, any other foods being ejected immediately on injection. A tumor was felt to be freely movable and corresponding to the position of the greater curvature of the stomach, and the case was diagnosed as one of malignant disease of the stomach. Post-mortem revealed the fact that the tumor felt was the entire stomach much contracted and only large enough to contain one ounce of fluid.

FIBRO-MYOMA.

Dr. Stevenson also showed a fibro-myoma of the uterus involving the posterior wall, that had been removed per vaginam, a fibroid in the uterine wall which had undergone degeneration, and an ovarian cyst.

RENAL CALCULUS.

Dr. Jas. McArthur gave report of a case of renal calculus. The patient, aged 12 years, at 5 years of age suffered from hæmaturia and for the past three years had frequent recurrences.

On Jan. 6th, 1898, nephro-lithotomy was performed by Dr. Wishart and the exhibited specimen removed from the pelvis of the kidney. The patient recovered from the chloroform but died in twelve hours.

The papers were fully discussed by Drs. Wishart, Moorehouse, Meek, Ferguson, Henderson and the president.

Moved by Drs. Ferguson and McArthur that Drs. Hodge, English and Moore be a committee appointed to wait upon the City Council at its next meeting to renew the application of this association for an initial grant of $500 for the establishment of a city bacteriological department in connection with the local board of health. Carried.

Book Reviews.

A Text-book of the Diseases of Women. By Henry J. Garrigues, A.M , M.D., Professor of Gynæcology in the New York School of Clinical Medicine ; Gynæcologist to St. Mark's Hospital in New York City, etc. Octavo, pp. 728. Containing 335 engravings and colored plates. Second edition, thoroughly revised. Philadelphia : W. B. Saunders, 925 Walnut street. 1897.

The first edition of Dr. Garrigues' admirable text-book of the diseases of women was very well received by the profession of the United States and Canada. The author's style of writing is clear and concise, and his large experience as a practitioner and teacher enables him to choose the most important points connected with each subject he treats, and present them to his readers in a lucid manner. In the second edition he has devoted a great deal of attention to aseptic surgery, in connection with the various operations which he describes. He has omitted certain parts of the former text and some of the illustrations, and at the same time has added much that is new, especially in connection with the surgical treatment of uterine fibroids and cancer, vaginal sections, and intestinal surgery. We have no hesitation in saying that it is in every way a good and safe book for both students and general practitioners.

The American Year-Book of Medicine and Surgery : Being a yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. Collected and arranged with critical editorial comments by eminent American specialists and teachers, under the general editorial charge of George M. Gould, M.D. One volume of nearly 1,200 pages, profusely illustrated with numerous wood-cuts in text, and thirty-three handsome half-tone and colored plates. Price : Cloth, $6.50 net ; half morocco, $7.50 net. Philadelphia : W. B. Saunders, 925 Walnut street.

We have nothing but the highest praise for this admirable and invaluable summary of the progress made in medicine during the year 1897. In commenting on the volume issued last year *The Lancet* (English) spoke as follows : " It is difficult to know which to admire most—the research and industry of the distinguished band of experts whom Dr. Gould has enlisted in the service of the Year-Book, or the wealth and

abundance of the con ributions to every department of science that have been deemed worthy of analysis. . . . It is much more than a mere compilation of abstracts, for, as each section is entrusted to experienced and able contributors, the reader has the advantage of certain critical commentaries and expositions. . . It is emphatically a book which should find a place in every medical library, and is in several respects more useful than the famous 'Jahrbucher' of Germany." We quite agree with *The Lancet's* estimate of this volume; and are pleased to add that the book for '97 is quite equal, if not superior, to its predecessor in all respects, while, at the same time, it contains seventy-five more papers.

A Text-Book of Diseases of Women. By Charles B. Penrose, M.D., Ph.D., Professor of Gynæcology in the University of Pennsylvania; Surgeon to the Gynæcian Hospital, Philadelphia. W. B. Saunders, 925 Walnut street, Philadelphia, 1897. Price, $3.50 net.

This is a good, practical text-book, written in a clear, plain style, well printed, and well illustrated. It is intended especially for students and will be found very suitable for their wants. At the same time, we think it will be highly appreciated by general practitioners. The author in most instances has recommended only one plan of treatment for each disease, hoping in this way to avoid causing confusion in the minds of students or physicians who consult the book. He has also, as a rule, omitted details in connection with anatomy, physiology, and pathology.

In the first chapter he discusses the general causes of diseases of women, and then goes on to describe very clearly and fully the methods of examination. After describing diseases of the external genitals and their treatment, he devotes several chapters to the perinæum, its injuries and results of such injuries. He then takes up displacements and disorders of the uterus, fallopian tubes (including tubal pregnancy), urethra, and bladder. In the closing chapters he describes the technique of gynæcological operations, and the after treatment of coeliotomy.

Diseases of the Eye. By Edward Nettleship, F.R.C.S., Ophthalmic Surgeon at St. Thomas' Hospital, London; Surgeon to the Royal London (Moorfield) Ophthalmic Hospital. Revised and edited by W. T. Holmes Spicer, M.A., M.B., F.R.C.S., Ophthalmic Surgeon to the Metropolitan Hospital and to the Victoria Hospital for Children. Fifth American from the sixth English edition. With a supp'ement on "Color Blindness," by William Thomson, M.D., Emeritus Professor of Ophthalmology in the Jefferson Medical College of Philadelphia. Handsome 12mo. of 521 pages, with 2 colored plates and 161 engravings. Cloth, $2.25. Lea Bros. & Co., Publishers, Philadelphia and New York. 1897.

The present edition is in every way up to date. It is a new and wise departure to bring more fully into notice than usual American ophthalmic ideas, and thus to make the work more suited to the wants of the English-speaking world. It has all the thoroughness and correctness of detail and description which any work Mr. Nettleship is connected with is sure to have.

The portion devoted to the eyelids and lachrymal passages is succinct, but at the same time full of information and easily to be understood. The use of styles is even more to be advised than herein stated, as it leads to less probing, which is a boon to the sufferers. With respect to the conjunctiva a little more minuteness of detail regarding treatment might be usefully given. In gonorrhœal ophthalmia the lotion of carbolic acid, 1 in 20, is not mentioned, a remedy which some consider one of the most valuable and easily applied. As to the cornea, the description of the affections, the plates and the treatment leave nothing to be desired. The papers on iritis, cyclitis, hyalitis, etc., are good; but there is slight or no mention made of the use of hypodermic injections of pilocarpine with or without mercury and the iodide of potash, which has proved most beneficial in syphilitic diseases of the eye where other remedies have failed.

Regarding cataract, an exceedingly well-arranged and clear description is given of the lens and its diseases. The diseases of the deeper structures of the eye are clearly and fully described, and at the same time there are given many expressive illustrative plates. Well executed illustrations are a great aid to the reader, and the number in this edition is to be commended.

In the section devoted to operations their free use is of great value. The supplement, in regard to color and visual tests, and the appendix of formulæ are well and clearly arranged so as to be easily grasped. The type and paper are excellent.

TRANSACTIONS OF THE AMERICAN PEDIATRIC SOCIETY. Eighth Session, held in Montreal in May, 1896. Edited by Floyd M. Crandall, M.D., and reprinted from the Archives of Pediatrics. A. G. Sherwood & Co., 47 Lafayette Place, New York.

It is always with a feeling of interest that a reader opens a volume of Society Proceedings. In it we expect to find questions of vital interest to our profession dealt with in a masterly manner, and to have light thrown on obscure topics.

The present report is late in appearing, but to any one who is not able to follow closely the development of Pediatrics it will be a valuable acquisition. The front of the book is brightened by a photo-gravure of the president, Dr. James O'Dwyer, of New York city. Then comes the presidential address, "The Evolution of Intubation." The writer describes in detail the different instruments prepared by him, thirteen tubes in all, the changes made as each successive one was found defective, until finally the present set was produced.

It was very truly a process of evolution, and, as the author points out, shows the wonderful results which can follow systematic thinking. The experiments began in 1880, and it was not till 1886 that the final set was perfected, and they have been so perfect that no modification of any kind has been made in them.

A cut is given of the thirteen different tubes tried, with the four extractors.

This volume contains the now well known "Report of the Societies' Collective Investigation Committee on the use of Antitoxin."

This is followed by a number of papers on diphtheria, one of which is of particular interest, viz., "Cause of Sudden Death after Antitoxin Injections." The authors, Seibert and Schwyzer, undertook experiments along three lines :

1st. They injected large doses of fresh and old antitoxin.

2nd. They injected large doses of carbolic acid in the strength used to preserve the serum (Behring's serum is supposed to contain ½ per cent. of carbolic acid).

3rd. They injected two c.c. of air.

In each case the injections were made into the internal jugular vein. The air injections were the only ones that proved fatal, and the authors concluded accordingly. To me it appears inconceivable that any physician could inject air in such large quantities while using ant toxin.

Then follows three articles on Lumbar Puncture in Meningitis, one on Pasteurization of Milk, and twenty-five more dealing with different subjects in a clinical manner, some of them being reports of cases. All of these articles are by well known writers, such as : Holt, Seibert, Northrup, Chapin of New York, Osler of Baltimore, Lafleur & Blackadar of Montreal, Rotch & Townsend of Boston, and many others.

A System of Practical Medicine. By American authors. Edited by Alfred Lee Loomis, M.D., late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M.D., Professor of Medicine in the New York University. To be completed in four imperial octavo volumes, containing from 900 to 1,000 pages each, fully illustrated in colors and in black. Volume III.—Diseases of the alimentary canal, peritoneum, liver, and gall bladder, spleen, pancreas and thyroid gland, chronic metal poisoning, alcoholism, morphinism, infectious diseases common to man and animals, miscellaneous subjects. For sale by subscription. Per volume, cloth, $5 ; leather, $6 ; half morocco, $7. Lea Brothers & Co., Publishers, Philadelphia and New York. 1898.

The third volume of this splendid work sustains the high degree of excellence of its predecessors. It is of special interest to Torontonians in that one of the most important articles is from the pen of J. E. Graham, the Professor of Medicine in the University of Toronto.

The first article in the volume—that on diseases of mouth, tongue, tonsils, pharynx, and salivary glands—written by Cabot, of Boston, is terse and practical. Chlorate of potash, which is used so indiscriminately in diseases of the mouth and throat, is recommended in ulcerative stomatitis only, where it is said to be a wonderfully effective though somewhat dangerous remedy. He emphasizes a fact too often neglected, namely, that in the pseudo-membranous form of follicular tonsilitis,

when a widespread membrane is present, bacteriological examination alone can decide whether it is or is not diphtheritic. Acute follicular tonsilitis is, he says, self-limited, and cannot be aborted or much shortened, but phenacetin allays the fever, pain and soreness; there is no better gargle, he says, than hot milk. In the removal of hypertrophied tonsils in adults, on account of the danger of hæmorrhage, he recommends the cold wire polypus snare instead of tonsilotome.

Allen Jones, of Buffalo, contributes an article on diseases of the œsophagus. Stockton, of Buffalo, has devoted a good deal of attention to diseases of the stomach, and his article (written in collaboration with Allen Jones) is an able presentation of a subject in which marked advances have been made in the last few years.

The articles on diseases of the intestines are written in part by W. W. Johnston and in part by Henry M. Lyman, of Chicago.

McNutt, of San Francisco, contributes a good article upon appendicitis. He makes a timely protest against abdominal operations being undertaken by those who have neither experience nor training in such work. He thinks it absurd to contend that every case diagnosed as appendicitis should be operated upon within the first twenty-four hours, condemns opiates, and advises laxatives—calomel or castor oil by preference—and advises operation only when serious doubt arises as to the necessity therefor.

Dock, of Ann Arbor, writes the article on intestinal parasites, and Vaughan, of the same place, the very useful paper on food poisoning.

H. A. Hare's article on diseases of the peritoneum is one of the best in the volume. An interesting observation is that hysterical peritonitis may simulate acute peritonitis very closely, every symptom being present, even fever and apparent collapse. In the treatment of acute diffuse peritonitis he is an advocate of the opium treatment when operation is not deemed advisable. But he strongly advocates that the surgeon should always be called in consultation and that most of the cases should be operated on.

No article in the volume reflects greater credit upon the writer than that of J. E. Graham upon diseases of the liver and gall bladder. It shows an intimate acquaintance with the literature of the subject as well as a thorough practical knowledge of the various disorders of these important organs.

George Roe Lockwood, of New York, contributes the article on diseases of the spleen, and Stockton, of Buffalo, that on diseases of the pancreas. The article on goitre and exophthalmic goitre by Kinnicutt, and on cretinism and myspædenea, by M. Allen Starr, are of special interest and could scarcely be improved upon.

Next comes two able articles from the pens of Montreal writers, viz.: Chronic metal poisoning, by Frederick Finley, and alcoholism and morphinism, by James Stewart.

The infectious diseases common to man and animals, viz.: Glanders, anthrax, rabies and actinomycosis are discussed in an able and interesting manner by James Law, the professor of veterinary surgery in Cornell University.

W. B. James next contributes short articles on hæmophilia and filiaria sanguinis horninis, and then comes a first-class article on diabetes and leycosuna, by Warren Coleman.

The last article in the volume is on insolation, and the author is Alexander Lambert, of New York.

The general excellence of the volume, as of its predecessors, is such as to commend it to the general practitioner. Advances have been made along so many lines during the past few years that if we do not read the new books we soon find ourselves away behind the times.

Medical Items.

DR. F. T. BIBBY has removed from Port Hope to Brighton.

DR. G. R. MCDONAGH has been enjoying a trip to Mexico.

DR. MORLEY CURREY has located on Carlton street, Toronto.

DR. SUTHERLAND (Tor. '97), who practised in Kaslo, B.C., last year, has gone to the Klondike.

DR. JAS. F. W. ROSS took a two weeks' trip in February, visiting New Orleans and other southern cities.

DR. THOMAS H. WHITELAW, of Guelph, intends, it is said, to move out to the west and practise in Edmonton.

MRS. ERNEST HART is collecting material for a "life" of her husband, which she intends to prepare for publication.

THE American Medico-Psychological Association will hold its fifty-fourth annual meeting at St. Louis, Mo., May 10-13, 1898.

DR. BEATTIE NESBITT, who recently spent some weeks at Johns Hopkins Hospital, has again gone to Baltimore for a couple of months.

THE Prince of Wales has been pleased to appoint Mr. Herbert W. Allingham, F.R.C.S. Eng., to be surgeon to His Royal Highness' household.

THE ONTARIO MEDICAL ASSOCIATION.—The next annual meeting of the Ontario Medical Association will be held in Toronto, June 1st and 2nd.

PROFESSOR HUERTHLE has been appointed to succeed Professor Heidenhain, whose assistant he formerly was, in the Chair of Physiology in the University of Breslau.

THE American Academy of Medicine will hold its twenty-third annual meeting at Denver, Colorado, on Saturday, June 4th, and Monday, June 6th, 1898, in the Brown Palace Hotel.

DR. J. MILTON COTTON, who practised in Lambton Mills for fifteen years, has removed to Toronto, and is now living at 218 Simcoe street, in the house formerly occupied by the late Dr. Strange.

GERMAN SURGICAL CONGRESS.—The twenty-seventh Congress of the German Surgical Society will be held this year in Berlin in the

Langenbeckhaus, from April 13th to the 16th, under the presidency of Professor F. Trendelenburg, of Leipzig.

THE National Confederation of State Medical Examining and Licensing Boards will hold its eighth annual meeting, Monday, June 6, 1898, at the Brown Palace Hotel, Denver, Colorado, at 10 o'clock a.m., under the presidency of Dr. Wm. Warren Potter, of Buffalo.

THE MEDICAL EXCURSION IN JUNE TO DENVER AND SALT LAKE CITY.—The American Medical Association meets at Denver, June 7th to 10th. One of the features of the gathering will be an excursion from Denver to Salt Lake City and return through the "heart of the Rockies."

PROPOSED TORONTO ACADEMY OF MEDICINE.—Efforts are being made to amalgamate the different medical societies of Toronto, viz.: Toronto Medical Society, Toronto Clinical Society, Toronto Pathological Society, and Toronto Medical Library Association, under the title of the Toronto Academy of Medicine.

OBITUARY.

Sir Richard Quain, Bart., Physician Extraordinary to her Majesty, President of the General Medical Council, and Editor of the Dictionary of Medicine, died March 13th, 1898, aged 82.

DR. THEOPHILUS PARVIN died at his residence in Philadelphia, January 29th, 1898, aged sixty-nine years. His death was attributed to cardiac asthma, complicated by uræmia and œdema of the lungs.

JOHN DICKSON KELLOCK, M.D.—Dr. J. D. Kellock, of Perth, died suddenly of heart disease, while engaged in attending to an urgent professional call, January 23, 1898, aged 63. He took his medical course in Kingston, and received the degree of M.D. in 1862. He at once settled in Perth, his native town, and continued in active practice there up to the time of his death.

CHARLES FREDERICK SNELGROVE, M.D.—Dr. C. F. Snelgrove, of Meaford, died February 22, 1898, in the 42nd year of his age. His death was the result of injuries received about a week before by the running away of his horse. He was educated in Trinity Medical College, and received M.D. from Trinity University in 1885.

HENRY DONALD FRASER, M.D.—Dr. H. D. Fraser, of Orangeville, died suddenly at his home, February 16, 1898, aged 38. He had been overworked for some time, and lay down to rest late in the afternoon. When one of the family went to call him for his evening meal she found him dead. Heart failure was said to be the cause of death.

THE

CANADIAN PRACTITIONER

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PUBLISHERS:
THE PRACTITIONER PUBLISHING COMPANY,
TORONTO.

VOL. XXIII.] APRIL 1898. [No. 4

Original Communications.

DISEASE OF THE CORONARY ARTERIES AND ITS EFFECTS.*

BY DR. G. SILVERTHORN,
Physician to Home for Incurables and House of Providence, Toronto.

THE subject of this paper embraces so much, that I propose to limit myself to a review of the subject, ending with an exhibition of microscopic specimens illustrating one or two of the conditions.

The diseases of the coronary arteries to which I wish to draw your attention are (*a*) atheroma, (*b*) thrombosis and (*c*) embolism.

Slight atheroma of the coronary arteries is a very common condition, almost constant in the aged, and when we find a general arteriosclerosis there is almost certain to be disease of the coronary arteries

*Read before Toronto Pathological Society.

with it. We have, however, cases in which the coronary arteries seem about the only vessels affected ; this "localized" atheroma, especially in the young and middle-aged, is generally due to syphilis. Extreme sclerosis of the coronary arteries is common in the aged, not as a cause of death, but as a post-mortem find.

Atheroma of a vessel necessarily leads to more or less narrowing of its lumen, and when this narrowing is extreme, and other conditions are favorable, we have our second condition as a result—*thrombosis*. When the narrowing is not of such a degree as to cause thrombosis, we have effects associated with it varying all the way from no symptoms at all to shortness of breath on exertion, fatty degeneration and angina pectoris. These conditions I do not intend to discuss, so we come at once to the effects of blocking of the coronary arteries by thrombosis or embolism.

The effects of a complete blocking of a coronary artery are (1) sudden death, (2) infarct, white or red, (3) rupture, (4) fibrous myocarditis, (5) aneurism of the heart, (6) abscess of the wall of the heart.

The terminal branches of the coronary arteries are end arteries in spite of the fact that Wickersheimer has succeeded in making an injection fluid pass from one artery, through communicating branches, to another. The coronary arteries anastomoses, but the anastomosis is so slight that it does not permit a collateral circulation of such extent as to preserve the infarcted area from degeneration.

Kolster† tied a small branch of the ramus descendens in the dog and kept the animals alive from one day to seventeen months. The microscopical examination of a heart of a dog killed twenty-four hours after ligation, showed a "typical coagulation necrosis in the area of the artery ligated." Kolster remarks that "nothing else could have been expected, for Weigert (Virchow Archiv. Bd. LXXIX.) took these very infarcts as a type of coagulation necrosis."

In dogs kept longer alive the progressive alterations were traced from day to day and month to month, and resulted in an area of fibrous myocarditis exactly corresponding to the area supplied by the ligated vessel.

W. T. Porter‡ ligated the descendens in the dog a few millimetres from its origin ; two dogs lived, respectively, four days and fourteen

†Skand. Archiv. f. Physiolog. 1893. iv. pp. 1-45.

‡Archiv. f. d. ges. Physiolog. 1894. lv. pp. 366-371.

days and a half. Characteristic anæmic infarcts were found occupying the anterior part of the septum, and that part of the anterior wall of the left ventricle which adjoins the interventricular septum.

W. T. Porter* has an interesting series of experiments on dogs on closure of the coronary arteries, and comes to the conclusion that the "frequency of arrest is in proportion to the size of the artery ligated."

In the human heart blocking of one of the branches of the coronary arteries by an embolus or by thrombosis may cause sudden death, and the frequency would be in proportion to the size of the vessel affected, other things being equal. In thrombosis the rate of closure would have an influence. That sudden death can occur is of special importance in medico-legal cases, as it happens rather frequently from this cause.

Should sudden death not occur we have the condition known as anæmic necrosis or white infarct as a result. The affected areas, when recent, are firm and appear only as dull, yellowish discolorations of the heart muscle; after a time they become softened and friable and assume a yellowish-white tint. They are generally irregular in outline and are at first raised above the surface, although later they may be retracted. The pericardium over it may be covered with a grayish membrane, and if the area extends to the endocardium, we may find thrombi adhering to the heart wall corresponding to the area affected.

A red or hæmorrhagic infarct is present when an extravasation of blood takes place from the capillaries, and the appearance and subsequent processes differ only to the extent of the extravasation.

Microscopically the muscle cells are fragmented and granular in appearance, the nuclei and striæ disappear and sometimes there is some formation of oil globules. The tissue is soft and easily torn.

Should this condition affect a considerable portion or the entire thickness of the wall, the result might be a rupture of the heart and consequent, more or less sudden, death.

When this process of anæmic necrosis has proceeded a certain length and death does not ensue, we have a process of repair set up. This consists of the removal of the detritus followed by increase in connective tissue and the gradual formation of the condition known as fibrous myocarditis. Here the original anæmic infarct is converted into fibrous tissue with contractions of this tissue, showing its position. The muscular elements are never regenerated.

Fibrous myocarditis may thus result by the gradual transforma-

*Journal of Experimental Medicine, January, 1896.

tion of a white or red infarct, but is most commonly caused by a gradual narrowing of a coronary branch by obliterative endarteritis. This may be the same process as from an infarct, only on a microscopical scale.

If the patch of fibrous myocarditis is of considerable extent and affecting the whole or nearly the whole thickness of the wall, we may have as a result *anœurism of the heart.*

In pyæmia the coronary arteries may be blocked by septic emboli and then the infarcts are of the nature of miliary abscesses. These may not cause any disturbances, but when large may rupture into the ventricle or pericardium.

Rupture of the heart is divided into (1) traumate (2) spontaneous. Spontaneous rupture of the heart was observed by Harvey, and may occur in any chamber, is most frequent in the left ventricle, rare in the right ventricle, and still more rare in the auricles. The majority of those affected are males and over sixty years of age.

Rupture of the heart usually takes place during exertion, but sometimes occurs during sleep. Other immediate causes are fright, labor, tetanus, epilepsy, copulation. George II. of England died of rupture of the heart due to straining at stool, and Philip V. of Spain died of rupture of the heart on hearing of the downfall of Piacenza.

That spontaneous rupture may occur only in a diseased heart was recognized by Morgagni. These diseases are, abscess, hyaline and amyloid degeneration, fatty degeneration, aneurism of the wall, new growths, echinococci, but while these are of occasional or possible causes, the majority of cases may be traced back etiologically to the degeneration called arterio sclerosis and its resulting changes. These changes are most frequent in the left coronary artery and its anterior branch.

The rupture is usually sudden and complete, but ruptures partially through the wall may take place causing very severe pain due to separation and laceration of the muscle fibers. This separation and laceration may be in different directions and different planes, thus giving rise to a kind of dissecting rupture, taking possibly days for its passage through the wall of cavity. At other times the progress in one particular spot may not extend all the way through the wall, but commence anew at a more favorable situation and rapidly tear asunder the tissues. From this rupture the blood is poured out into the pericardium; if very slowly through a small external opening the blood may clot in successive layers on the surface of the heart and thrombi form in and around the rupture.

If from a larger opening, and this is the usual case, the pericardium is rapidly filled with blood and death takes place quickly with only partial clothing of the exuded blood.

With these preliminary remarks I would like to now draw your attention to this specimen of a rupture of the left ventricle in a specimen obtained from a man sixty years of age, for some time invalided by a chronic neuritis, peripheral, apparently, but still working when he felt like it at his trade, that of a cabinet-maker.

On the evening of June 4, 1897, after having eaten his usual evening meal he suddenly fell to the floor, pale and unconscious, in a few minutes becoming restless and crying out as if in terrible pain, hand applied to the epigastrium. The three succeeding days he spent mostly in bed, pain becoming less, and sensorium clear. On the fourth day, in the morning, he got up, ate his breakfast, felt like going to work, and intended doing so. Went to the bath-room, and after defæcation, buttoned up his clothes and started to leave the bath-room. He suddenly fell forward on his face to the floor, and moaned a little. Was carried to his room, gasped a few times, and in a few moments was dead.

Post-mortem. Abdominal organs as usual. Brain and cord not examined. Pericardium distended with blood about ten ounces, partly fluid and partly clotted. A longitudinal rupture through the whole thickness of the left ventricle, one inch in length, with ragged edges, commencing one-half inch from upper border of ventricle, and extending midway between anterior and posterior borders, and extending from point of commencement towards the apex. Internally the rupture is of about the same dimensions and in the same direction, but more ragged, and consequently not so linear in appearance. The left ventricle wall is not more than three-eighths of an inch in thickness at any part, and its substance is very friable, and "grossly fatty" in appearance. The heart in other respects is fairly normal, except that the muscular tissue everywhere is somewhat soft. There is a patch of atheroma about as large as a five cent piece in the aorta, two inches from its commencement. All the coronary arteries are atheromatous. The anterior branch of the left coronary artery, immediately after its commencement, is occluded by a partly organized thrombus, which extends downward as far as the artery can be conveniently opened up. In the interior of the left ventricle, near the apex, some columnæ carnæ and part of the wall of the heart have been torn, and between the torn portions and around them are several very firm thrombi. Other organs as usual.

The progress of events in this heart is not hard to trace. There was atheroma of the left coronary artery, which was most marked in its right branch. A thrombosis of the vessel occurred as a result of the roughened calcareous plates found in the artery, and the partial occlusion of the vessel.

There resulted, in consequence of the thrombosis, an anæmic infarct of practically the full depth of the muscular tissue on the anterior surface of the left ventricle.

The blood pressure in the ventricle was sufficient to tear asunder near the apex some softened and necrotic fibres of the wall, including some columnæ carnæ on the first day of pain, June 4th. On the 8th of June, after straining at stool, probably, the rupture occurred through the whole thickness of the wall, at the site as you see it now, and death followed rapidly.

DICEPHALOUS MONSTER.

By W. H. Peplar, M.D.,
Toronto.

THE specimen I am presenting this evening is an incomplete dicephalous. From the photograph you will be able to make out two perfectly formed faces placed side by side on a single head; one face looking to the front and right, the other to the front and left side, the head slightly broader than that of an ordinary fœtus at term. Body and limbs are well developed and normal. I am indebted to Dr. E. E. King for an excellent skiagraph which shows the spinal column dividing at about the seventh dorsal vertebra (here I might observe that the more complete the dicephalous the lower is the division of the column). Complete dicephalous monsters generally have the bifurcation in the sacral region. Dr. Anderson kindly assisted me in making a number of cross sections, which show the brain to be quite undeveloped as to convolutions. There appears to be three hemispheres; two larger and one smaller. The section through the cervical region shows one trachea, one œsophagus, two spinal columns, and but one cord. On referring to the skiagraph you will see that one column is better developed than the other, the more fully developed one containing the cord. The other parts of the body are normal.

I might add that the mother, a multipara, with good previous history, gave birth to this child at full term without complications; the child showed signs of life.

The causes of these double monsters are very interesting. The ancient Greeks, and later the Romans, long before the days of the microscope, described the fœtus in reproduction as the semen or menses, and some both. As Aristotle, who says: "The blood of the menses is the marble, the semen is the sculptor, and the fœtus is the statue." No idea of ova or spermatozoon was known, and they thought monsters were caused by some fault in one or other of these factors. They also had the idea that intercourse between humans and brutes caused monstrosities. This theory can be traced up to

the seventeenth century. The Hebrews thought that coitus during menstruation produced monsters. At the present time the opinions seem to be divided between two theories—one that double monsters are caused by fission of blastoderm; the other a cleavage of blastoderm. The latter seems to be in favor. The cause of this cleavage is as yet unknown.

Windle believes that there is first unity followed by fission. Fission takes place probably at the very earliest stage of differentiation. He gives various explanations as to cause, such as overstimulation, faulty relation between embryo and zona pellucida, superabundance of formative material, entrance of two or more spermatozoon, faulty spermatozoon, and finally what the author is inclined to believe the probable cause, a retention of the whole or part of the second polar body. Klausseur deals very fully with this subject.

After taking up the different theories, he advocated the following: Firstly, the multiple form may arise from primative plurality of the formative substance, this condition leading to twins, etc. Secondly, from fission with post-germination, the valves of the embryo forming their missing portions, not from themselves, but from the neighboring material, in which case double monsters are the result.

Wilson showed in his experiments that by complete separation of the blastoderms he caused each to enter on an independent development and produced twins.

Incomplete separation of blastoderms gave rise to double embryos of all varieties.

Hereditary and maternal impressions are small factors in the cause of monsters.

ANÆSTHESIA AND ANALGESIA.*

By H. H. Oldright, M.B.,
Assistant Surgeon, St. Michael's Hospital.

DURING the past fifty years, dating from the introduction of anæsthesia by volatile drugs, the subject has never failed to be of interest to the medical profession.

It is an obvious but curious fact that the first-discovered anæsthetics, nitrous oxide, ether, and chloroform are those held most reliable to-day, and, taking them in the order named, other things being equal, we find the mortality records from their use to increase in the same order.

There has been much discussion in the past on the relative safety and efficiency of ether and chloroform, and at the present time both have their special advocates, and, as regards the prevailing use of each, it would be hard to say which is most generally employed.

In the tropics, as you all know, chloroform, on account of its less volatile properties, is better kept in stock, and, for the same reason, is more efficient when administered at any time in those regions, or in our own latitude in the hot summer months.

Thus the surgeons in India and the Southern States are accustomed to employ chloroform to produce anæsthesia.

Frederick W. Hewitt, London Hospital, says that the safety of the patient depends more on the anæsthetist than the anæsthetic, and in this connection Marmaduke Shield says that practical instruction in anæsthesia is neglected for the sake of theoretical or non-practical subjects.

Treves thinks that ether is preferable as a general anæsthetic, but respiratory catarrh contra-indicates it, and says, moreover, that no anæsthetic should be used in conditions of collapse, or where sensation is blunted.

I well remember, in my childhood, holding basins without any qualms while the factory hands had their fingers amputated after having taken that milder anæsthetic, alcohol, in the shape of brandy

*Read before the Toronto Medical Society.

or whiskey, and this brings forth the remark or thought, would it not be better for the race to bear their pains more stoically, without such general resort to anæsthesia? But if we need anæsthesia, the depth must necessarily differ in degree according to the severity of the operation, as Hewitt remarks.

Now, to revert to the relative merits of the two anæsthetics, while believing that ether, at the time of administration, as regards safety, is as a rule the preferable anæsthetic, I must say that, having used chloroform for the past six years at the hospital in a great number of cases, it is my opinion that the danger in its administration has been over-rated.

There have been cases where we have had to use or change to ether where a stimulating effect was needed, but in cases where this was not required we have found the chloroform most satisfactory.

Among the patients who do not stand chloroform well are the neurotic (those with shallow, irregular breathing habit), the adynamic (poor nervous force or inco-ordination, although the muscles may be well developed), and the very anæmic. The cachexiæ contra-indicated one or the other drug. The Vienna mixture is still *subjudice*.

I would like to give you some records to criticize on the safety of chloroform, the references being from the excellent work on anæthesia by Henry M. Lyman, of Chicago.

He quotes Chisholm, in his work, "What anæsthetic shall we use?" who states that during twenty-eight years from the time of the introduction of chloroform there were only two deaths from its use in the Royal Infirmary at Edinburgh, and that during the ten years of that period there were 36,500 administrations with one death.

From other countries we have:

Elser, of Strasburg, 16,000, no death.

Kidd, of London, 10,000, no death.

Richardson, of London (had seen), 15,000, one death.

Clover, of London (self), 3,000, no death.

Bilroth, of Vienna, 12,500, before a fatal accident.

McGuire, Confederate army, 18,000, no death.

Chisholm, of Edinburgh, 6,000, no death; his estimate one in 20,000.

Crimea—French army, 30,000, two deaths.
English army, 12,000, one death.

American war, 80,000, seven deaths.

Nussbaum, 15,000, no death.

Kolney, 7,000, no death.

Kappelar, 5,000, one death.
Bardeleben (witnessed), 30,000, no death.
1879, Germany, four deaths in 84,000.
1875-1880, St. Bartholomew's,
Chloroform, 4,810, two deaths.
Ether, 6,440, two deaths.
Summing up all statistics we have:
Ether, 99,255 cases, six deaths, 1-16,532.
Chloroform, 492,235 cases, 84 deaths, 1-5,860.

The analgesics, or local anæsthetics, which are commonly used at the present time are cocaine, ethyl chloride, atropia and morphia, the latter two being often combined with ether and chloroform, the former two being used by themselves.

Eucaine is a later local anæsthetic, which is said by Charteris and McLennan in *The British Medical Journal* to be as effectual as cocaine and less toxic.

Dr. Geo. W. Spencer, in an article in *The University Medical Magazine*, November, 1896, says that he has used it extensively in 2 per cent. solution, using 15 grains in one case and has used ℥ii of 5 per cent. solution.

Anæsthesia is obtained in five to ten minutes, and lasts twenty to sixty minutes. With cocaine, the great disadvantage is that when used in very vascular and absorbent parts it sometimes has an alarming depressant effect on the heart and circulation, unless the parts are capable of being constricted to avoid a rapid absorption of the drug into the general circulation.

With ethyl chloride we have been able to remove, without this danger, large growths on the face, an inch in diameter, without any marked discomfort to the patient, the only drawbacks here being the hardening of the tissues to be cut, and, perhaps, a coincident loss of vitality of the tissues at the edges of the wound.

My friend, Dr. Wm. Carter, observes that with cocaine injection we must allow the drug to circulate in the tissues before applying the Esmarch, while with ethyl chloride we get a prolonged effect from the freezing by applying the Esmarch first, thus preventing the warm blood from thawing the frozen area.

A. E. Bridger, in the Proceedings of the Society of Anæsthetists, January 21st, 1897, speaking of the disorders favored or produced by anæsthetics, cites a case of acute mania following the administration of nitrous oxide gas.

About two months ago I engaged a servant, who was with us three days, at the end of which time I had to send her to the

General Hospital, from whence she went to the gaol (hospital ward).

Three days previously to the time of our engaging her she had had a tooth extracted, cocaine and nitrous oxide having been used.

At the time I did not see the connection between the administration and the mania, but, since seeing the above instance, think that the one may be a sequence of the other.

She had been worrying before, and recovered in five weeeks.

He says also that the administration of chloroform to morphine habitues may cause prolonged excitement at the time.

In this connection I would cite two cases which may be of interest on account of the diversity of the effects produced in the subjects. They were both in the habit of taking a number of grains of morphia per diem. In the first the anæsthesia was required for the extraction of teeth, the amount used from the commencement to the end of the administration lasting fifteen minutes, the patient being deeply under, was only one drachm (drop method).

In the second case the patient had used morphia for two years on account of tubercular disease of the ankle joint.

Before the administration she had received in the morning one and a half grains of morphia, but during the first stage of anæsthesia there was great excitement (prolonged) and she was with difficulty brought under the influence of chloroform which was changed for ether on account of the irregular action of the heart. The anæsthesia was not deep during the time of the operation, although a large amount of both anæsthetics was used.

And now I would ask you to consider the effects of another analgesic which we are accustomed to look upon rather as a hæmostatic, namely the Esmarch bandage and tourniquet.

We all probably have observed the anæsthesia produced by our having slept with the arm raised above our heads or else from the pressure of the head on the brachial artery and plexus of nerves.

This pressure, as we know, may even produce paralysis of the arm. The tourniquet in the same manner causes a loss of feeling in the limbs. Since reading this paper I see that Buxton says that John Hunter operated on a patient, amputating the thigh after strong pressure had been made on the sciatic nerve trunk.

Again, if we tie a ligature around the body of a frog so as to cut off the circulation between the two halves and then dip either part into a solution of chloroform, the half immersed will become anæsthetic and motion will be lost.

We may thus arrive at the conclusion, verified I think by experiment, that having anæsthetized a patient with morphia and

chloroform, the Esmarch and tourniquet having been applied, we have the patient in the most favorable condition to feel least pain, and need not use as great an amount of the anæsthetic, thereby lessening the risk from the chloroform.

Again, where we are not able to use the tourniquet as about the face and trunk, we may notice that during the first incision through the skin our patient is stimulated reflexly, the arterial tension increases for the time being, and it would be a mistake to use a greater amount of the anæsthetic, for, as we find, this tension is not lasting, the deeper parts (muscle, fascia, peritoneum, and bowel) not being as well supplied with those nerves which transmit painful impressions. This point was brought to me forcibly by Dr. Nicholas Lum, of Chicago, on hearing him remark on the same and seeing him open the bowel in the secondary operation for colotomy, the patient, an old lady, having had no anæsthetic and not evincing any feeling of pain.

We need not therefore keep our patient as deeply under after the skin incision has been made as before, neither for the sake of the convenience of the operator nor the feeling of the patient.

As to the best method of administering chloroform, that where it is used drop by drop at four or five seconds' intervals at first till the patient's fifth nerve becomes accustomed to it is preferable, gradually lessening the intervals for a time, say five minutes, caeteris, paribus, then again increasing the length of the intervals as the heart distributes the anæsthetic equally throughout the body. The heart is thus able to distribute the drug in steady quantities both to its own muscle through the coronaries and to the brain and body in the order written.

Lauder Brunton says that the probable explanation of the absence of ill effects in giving a very large amount of concentrated vapor in the beginning of anæsthesia is that the patient is at that time in the most favorable condition to withstand the depression caused by this method, and that it is dangerous to commence by the drop method and give large doses in the later stages or to alternate large and small doses. We can judge the effect of the drug on the heart by the tension and rate of the pulse, which it is well always to watch, our sense of pressure touch being utilized for this purpose.

At the same time we use the sense of sight for any sign of hyperæmia, cyanosis or pallor of the chest and face, and also to note the state of contraction of the pupil, any sudden dilatation of which denotes either that the patient is about to vomit (irritation of the

sympathetic nerve causing contraction of the muscle supplied by it) or paralysis of the third nerve and sphincter, which is more alarming.

If there is a tendency to vomit give more anæsthetic, but if it occurs stop till it is over and the air passages are clear.

The most important sense is that of hearing, which enables us to judge of the rapidity and depth of the respirations, the character of the same, whether the passages between the posterior nares and the trachea are freely open or not, also whether there be mucus in trachea and bronchi or not, which would hinder the expiration as well as the inspiration of the anæsthetic.

If it is necessary to change from ether to chloroform we must allow for the imperfect elimination from collection of mucus.

A friend of mine called this "being drowned in her own secretions." Suppression of urine may follow the use of an anæsthetic more often with the use of ether, but as to the cause of this disaster we are still in the dark, and as has been observed it may be due to septic infection of the kidneys.

Henry M. Lyman, of Chicago, an advocate of ether, says that the risks from ether increase with age, on account of the tendency to bronchial catarrh, to a degree which is not conspicuous with the more potent agent chloroform, and cites cases of œdema with lingering death from the administration of ether, one of œdema of the lungs and pleuræ, operation tenotomy, administration for twenty minutes, amount 3 oz., becoming conscious and dying two hours later; another dying four hours after cessation of administration, the post-mortem examination revealing œdema of the membranes of the brain and of the lungs. Also a case of lingering death in a hard drinker, from chloroform ½ oz., time 1½ minutes; slept twenty minutes, was roused, and died one day and a half after operation. P. M. showed interstitial nephritis.

R. L. MacDonnell, M.D., McGill University, in an article in Woods' "Reference Handbook of the Medical Sciences" on idiosyncracy, says that a friend of his experiences a motion of the bowels every time he administers ether. He attributes the fatal effects of inhalation of chloroform in minute doses to this same cause—idiosyncracy. We should at any rate, be very cautious and administer slowly at first by the drop method, to observe if such an effect be present.

To illustrate this phenomena we may remember the case of Jenny Lind, the prima donna, who would almost faint from the smell of a rose thrown on the stage. I saw a case where the smell of pickles caused a dilatation of the vessels, and sweating over one half only of the head and face.

While this may be the immediate cause of serious symptoms, there is another which may be got rid of by the use of purgatives and intestinal antiseptics repeated as required for some days beforehand, namely, the depression from stagnant bile, food, and toxines.

Silk, King's College Hospital, gives beef tea four hours before anæsthesia (milk digests slowly), or a nutrient enema one-half hour before. He deprecates the use of morphia as an adjuvant.

Gilbert G. Cottam injects spartiene sulphate $\frac{1}{10}$ gr. before administration, and finds it an efficient heart stimulant.

Caffeine might be used the same way.

Dudley P. Allen finds that the body temperature varies much under an anæsthetic, heat being lost if the operation is prolonged; therefore we should make the time as short as possible for the sake of the patient, and should apply external heat.

Leonard Hill describes very well the manner and treatment of ill effects from chloroform administration. He distinguishes two forms of syncope, in the primary during struggling, with venous congestion from holding of breath, right heart and lungs loaded with blood and chloroform, left heart relatively empty; a deep breath is taken and the left heart filled with blood and chloroform from the lungs, which is distributed by the coronaries to the heart muscle first, paralyzing it, and causing complete loss of arterial tension.

Treatment: Feet-down position for a second, repeated if necessary; bleeding from jugular if necessary; artifiicial respiration, and strychnine. Avoid pressure on the abdomen.

Secondary syncope from exhaustion and gradual loss of arterial tension, causing anæmia of respiratory centre.

Treatment: Stimulants; head-down, feet-up position, and artificial respiration. In this case press the arms on the abdomen.

CONCLUSIONS.

1. Always have your hypodmeric ready beforehand with five minims of Liq. strychnia.

2. Give the anæsthetic to the patient, not the patient to the anæsthetic, *i.e.*, a small amount at longer intervals when breathing is deep or rapid.

3. Watch the effect on the heart at the radial pulse; the regularity and tension tell us more than the rapidity.

4. Choose your cases for either anæsthetic; a weak heart or adynamia indicates ether, while pulmonary catarrh or albumenuria contraindicates it.

5. Whenever possible have the intestinal tract empty and sterile.

THE SURGICAL TREATMENT OF INSANITY.

By Ernest Hall, M.D.,
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PRELIMINARY REPORT.

INFLUENCED by the work of Drs. Hobbs, of London, and Rohé, of Baltimore, reported at the Montreal meeting of the British Medical Association, I took the first opportunity to investigate and determine if these things be true. A former patient, Mrs. McF., aged 35, of excellent family history, no hereditary taint, had been committed to the Provincial Asylum during my absence in Europe. She was the mother of two children; the elder suffered from asthma, the younger from chronic hydrocephalus. She had enjoyed excellent health until, after attending to her household duties and acting as nurse to both children, she became considerably debilitated. This, with the shock of the younger child's sudden death, caused by falling from the verandah where his mother had placed him in a wheel chair, brought on intermittent melancholia from which she suffered for eight months. At this period, while visiting a friend, symptoms of pronounced insanity with suicidal tendency were developed. After a month's treatment under the care of a nurse she was committed to the asylum on April 1st, 1895, where she remained until January 3rd, 1898. During this period she was at times violent, would attempt to scratch and bite her attendants, exhibited a most obstinate disposition, was considered by the late matron as one of the worst cases, and by the authorities as hopeless. The medical superintendent gave the friends no encouragement as to her recovery.

Having obtained permission from the patient's husband, with the assistance of Dr. Boggs and with the courteous co-operation of the medical superintendent, Dr. Bodington, the patient was placed under chloroform and a pelvic examination made. The right ligament was thickened, left ovary prolapsed, uterus fixed, and perineum

partially ruptured. Upon this data, I recommended operative measures, my recommendation was accepted, and the patient was placed under the care of two trained nurses, as admission to the hospital was refused.

Section, January 5th, assisted by Drs. Frank Hall and Hart. Right ovary was found cystic with tubal adhesions, left ovary adherent in cul-de-sac, fimbriated extremity closed. The appendages were removed, uterus also curetted. The operation was brief and practically bloodless; post-operative history, normal; stitches removed on the twelfth day. The mental condition remained unchanged for some days. She persisted in sitting up in bed, tearing the bed-clothes, and endeavoring to bite and scratch the nurses. It was necessary to tie her hands to either side of the bed, and place a heavy bandage over the lower part of the body. Upon the fourteenth day after the operation she became calm and recognized her mother. On the following day she conversed a little and appeared to appreciate the kindness of the nurses. Upon the seventeenth day the patient seemed more rational, did a little sewing, and took an interest in her surroundings. The following day I allowed her to see her daughter, now a bright girl of eleven years, whom she had not seen since entering the asylum. The meeting was one not soon to be forgotten; it was one of those periods in a physician's life when his remuneration is beyond computation, an experience that lives. The patient acted and spoke as only a reasonable mother could. Day by day, as the physical strength increased, the mind became capable of more extended effort. Thirty-five days after the operation the nurse accompanied the patient to her home and remained with her a few days; and to-day, after two months, the patient is managing her own household and attending to her social duties with all the reason and energy of her former self. Her husband informed me that he detects no difference in her present mental condition from that of five years ago.

Such is the brief history of one who spent two years and eight months in the asylum, "a hopeless case of insanity," one who "was not a fit case for operation," and who would have been doomed to such a life until death closed the scene, who to-day is restored to her family. Of course, it is too early to speak of a permanent cure, and some critic may suggest that nature might have removed the disease, as many cases of insanity recover. But the fact remains that this patient was relieved of her insanity after the removal of diseased organs, that there were no indications of cortical or other lesions beyond the pelvis, that it is not in the ordinary process of nature that salpingitis adhesions become absorbed,

nor do cystic ovaries become normal; therefore, we are justified in concluding that the pelvic condition was the cause of the insanity, and that without surgical procedure probably the condition would have continued. Can we yet state with mathematical exactness what part of the body the mind inhabits, or is it located in one part to the exclusion of other parts? A study of the development of the nervous system in the lower forms of life would lead us to infer that we cannot give definite location to the mind. If so, possibly we may underrate the office of the abdominal ganglia and plexus, and we may find that the normal mentality may depend, to a much greater extent than we have formerly supposed, upon the proper condition of the abdominal and pelvic organs. If perineal lacerations are one-fifth as potent in their relation to the causation of neurasthenia as Professor Etheridge, of Chicago, would have us believe, what must be the effect upon the delicate nervous organism of disease of those parts which bear the most intimate relations to the consciousness? The invasion of the domain of the alienist by the gynæcologist marks an epoch in surgery. It is opportune to call a halt in the management of our ever-increasing burden of the incapable. It is the duty of the profession to consider insanity in the light of recent results and to demand a more scientific treatment of these unfortunates. If, as Dr. Hobbs reports, thirty per cent. of the insane women he examined were cured by appropriate treatment of the pelvic organs, why should not a searching enquiry be made into this matter? The prejudice of asylum superintendents, who may or may not be capable of diagnosing such conditions, should not obstruct progress in this department. So far I have had the opportunity to examine but four of the patients in our asylum; one here reported; a second, subject to epilepsy, had undeveloped uterus and ovaries; a third, retroversion with adhesions, and a fourth, upon whom I operated but a few days ago, had varicocele of both ligaments, peritoneal cysts and calcareous deposits in ligaments.

I would urge upon every physician the necessity of making a thorough pelvic examination under anæsthesia of every case before signing papers of commitment. If the physician has not the experience he should associate himself with one who has had special training in this department. Such careful discrimination would send at least one patient to the hospital for every two sent to the asylum. As a rule the patients are ignorant of their physical condition, and do not complain of pelvic pain or inconvenience. In personal communication with Dr. Hobbs he stated that his best results have followed the removal of fibroid and cystic ovaries. The case here reported falls within this classification. It would be interesting to continue the analogy in the treatment of the opposite sex. A very limited experience has shown a striking parallelism.

BERMUDIAN NOTES

By J. B. Fraser, M.D.

Toronto.

THE "Bermudas" are a group of British islands lying in the Atlantic Ocean, south of Halifax and 726 miles S. E. of New York. Leaving Toronto on the 15th of December, we arrived in Bermuda on the 18th, it taking only three days to make the trip.

The climate here is very different from that of Ontario. We found the weather mild, even warm at times, men were wearing straw hats and white flannel suits. Women appeared in muslin dresses and carried sunshades; while in the gardens, roses, lilies, pansies, geraniums, etc., were in full bloom; the fields were green, and trees in full leaf—some in flower.

The temperature varies only about 35 degrees throughout the year, ranging from 50 degrees F. in midwinter to 85 degrees F. in midsummer, with a mean average of 66 to 68 degrees F.

The rainfall is not excessive, and on account of the porous condition of the soil is speedily absorbed; in fact, one half hour after a heavy rainfall the water has disappeared, leaving the roads comparatively dry. One can always count on two health-giving principles, viz., plenty of sunshine and fresh, invigorating sea breezes; and as there are no large factories the air is never smoky, but clear and bracing as a rule. There are occasional fogs in the morning, but the sea breeze soon clears the air.

There are about 15,000 inhabitants (including the soldiers) of which about 60 per cent. are colored.

There is no such rush or bustle in Bermuda as we have in Canada, nor the extremes of wealth and poverty, as both money and property are more evenly distributed than with us.

The average house is built of soft limestone covered with cement, roofed with the same material, and having a gutter running around the lower edge of the roof to convey the rain-water to a cistern; this is their only source of obtaining water for domestic use, as there are no springs, creeks, or rivers in Bermuda. The

water is palatable, not differing much in taste from Lake Ontario water. The government passed a law compelling householders to whitewash their roofs at stated periods—this helps to keep the water pure and free from organic matter.

The old system of privy pits is still in general use, some use the dry-earth closet, but as they have not a system of waterworks, even in Hamilton, the modern arrangements are seldom seen. The streets of both St. George and Hamilton are lit with kerosene lamps, as they have neither a gas nor electric light plant in the islands.

For board and lodging in private houses one has to pay $10.00 to $12.00 per week; hotel rates are from $15.00 to $20.00 per week. The roads are excellent, they are smooth and firm and in many places are cut through the rock—in places the cutting is from twelve to fifteen feet deep. They have some fine horses and carriages, but also use donkeys for light work.

The islands are strongly fortified, and as Bermuda is the headquarters of the British North American fleet there are usually several men-of-war in the harbor, each with its complement of marines.

I am told that about once a year the military authorities take possession of the main roads, closing them by means of a chain across them, but with a soldier in attendance who will at once lower the chain if requested to do so—this is to show that the military authorities take precedence over the civil, and that Britain looks upon Bermuda as a naval and military station rather than a colony.

One of the attractions to the tourist is the dock-yard where the vessels of the British North American fleet are cleaned and repaired.

Here is seen one of the largest floating docks in the world; it is built of iron; was made in Britain, and towed across the Atlantic to Bermuda. It is a huge structure with the sides towering many feet above the sea, and large enough to accommodate any ordinary vessel or man-of-war. After entering the dock the water is pumped out of it, and although both dock and vessel are away from land the workmen can scrape or repair the hull as well as if they were on land.

The town of St. George was for many years the principal port, and did more business than Hamilton, but of late years the latter has overtaken and passed her rival. Some of the streets of St. George are so narrow that two carts cannot pass each other, but the main streets are of respectable width although too narrow for sidewalks. From Fort George one has a magnificent view of islands,

sky and water; reminding one of our own Thousand Islands.

At each side and rear of the Episcopal church are some old gravestones, and what strikes one forcibly is the curious method of burial. Instead of digging they build a square retaining wall of masonry about two feet high, place the body inside of this, and cover with solid masonry arched longitudinally; this makes a small closed vault which has to be broken open and cemented again if another body is interred; their reason for this method is the shallow soil, as the rock is at or within a few inches of the surface in nine out of ten cases. At times you see several graves side by side, all one pattern, all white, and most of them with inscriptions at the end of the grave.

LAVAGE OF THE ORGANISM IN ACUTE COCAIN POISONING.

Experimental Researches of Dr. Carlo Bozza, of the University of Naples.

A NEW general method of cure for all poisonings can be found in lavage of the organism, as proposed by Sanquirico. The latter—starting from the known canon of the pathology of the blood, "that the organism in normal conditions is endowed with a regulating power so quick and certain as to tend always, in qualitative and quantitative changes of the blood, to resume its original physiological condition" by means of the wonderful harmonious mechanism of hæmatopoiesis and secretion—endeavored to utilize the fact of the ready elimination of neutral liquids injected into the blood, with the object of freeing it mechanically from heterogeneous substances which might injure it.

This process, consequently, has nothing to do with the experiments of Landerer, who introduced into animals poisoned by chloral, etc., from whom a definite quantity of blood had been taken by blood-letting, an equal quantity of solution of chloride of sodium. The principal aim of Landerer was that of making the heart more active and also that of having a more rapid reformation of the blood.

Lavage of the organism, as I have practised it in my experiments, rests on the known fact that the vascular tree has the property of allowing itself to be distended, without experiencing any local or general change, by liquids injected in considerable quantities; and it proposes to quickly eliminate from the organism poisonous substances introduced in fatal quantities, by means of the secretory hyper-activity induced by the increased arterial pressure.

From what we have said one can infer that the advantages to be derived from lavage of the organism must, without doubt, be ascribed:

1. To the greater dilution undergone in the blood by the poisonous substance, which therefore reaches, in a smaller quantity, the anatomical element, upon which it exerts its elective action.

2. To the more rapid and certain elimination of the poison produced (*a*) by the gradual increase of the blood pressure, the mass of the blood plasm being increased by the addition of the sodium solution; (*b*) by the greater fluidity of the blood which, (Cohnheim) while it facilitates renal filtration, permits the heart to overcome more easily the resistance of the vessel walls.

3. To the lessened absorption of the substance administered, on account of the increase of the intravascular pressure, since, as we know, the fulness of the circulatory system is an obstacle to absorption.

It seems evident, therefore, that lavage of the organism, resting specially on the strength of the cardiac contractions, and upon perfect renal functions, but also on the sweat secretion, can be assisted, whenever possible, by the administration of digitalis and pilocarpin.

Sanquirico, in a series of experiments extended over many years, tried with varying results lavage of the organism in many poisonings, by strychnine, alcohol, chloral, nitrate of aconitine, urethane, caffeine.

Continuing such experiments, I have tried to find how far lavage of the organism can avail against acute cocain poisoning, which is met with not very rarely, since this alkaloid has been used as an anæsthetic in minor surgery.

As a neutral liquid I have used a physiological solution of sodium chloride, which has the advantage of having no solvent action on the red corpuscles, and hence does not produce hæmoglobinuria. For instrument I have not been able to use the common syringes, because, having at times to introduce large quantities of liquid, I should have to make too many punctures. This would be more dangerous when compelled to make intravenous injections. I have used, therefore, Rogers' apparatus for intravenous injections, because it permits the gradual and regular entry of the liquid into the vein at a known pressure, without any danger of the entrance of air. The needle and all the apparatus were diligently sterilized and the liquid filtered and sterilized. I made these experiments with dogs, which were more available than other animals for my purpose. I have been able to prove that young and lively dogs, in whom consequently the cerebro-spinal system is more easily excitable, are more susceptible to the toxic action of cocain.

Starting from these data I began to try the effect of lavage as caused by abundant hypodermoclysis of artificial serum in an animal poisoned by the minimum fatal dose of cocain, and was able

to see that by lavage not only did the symptoms of poisoning become less severe, but also that the state of stupefaction which was wont to remain in the animals after the convulsive stage and which preceded the period of depression and death, was eliminated.

(Then follows a series of six experiments with different kinds of dogs, a record of their condition after the hypodermic injection of varying doses of cocain, also of their condition at different periods after the injection of the sodium solution. I simply give one of these experiments in this translation.

Experiment 1.—Young and lively bitch, with red hair. Weight, 6 kilos.

2.15 p.m. Hypodermic injection of 18 centigr. of cocain.

2.40 p.m. Up to this time the animal has remained crouching on the ground. It rises suddenly and shows restlessness. Hypodermic injection of 100 grammes of sodium solution; after which there is less restlessness. Mydriasis.

3.15 p.m. The typical agitation of cocain poisoning is now seen. The animal jumps about and executes circular gyrations. Injection of 300 grammes of sodium solution, making the animal quieter.

4 p.m. After a period of quiet the animal again becomes agitated. I make an intraperitoneal injection of 200 grammes of sodium solution, since the extreme compactness of the subcutaneous cellular tissue makes absorption so slow.

The animal survived. Altogether, 600 grammes of sodium solution were injected.)

From these experiments I can make the following deductions:

(1) While the minimum fatal dose of cocain muriate administered hypodermically is 0.025 gr. per kgr., one can inject, of the same drug, without fatal result—

(*a*) Gr. 0.03, if we follow the said injection with hypodermoclysis;

(*b*) and 0.035 gr. per kgr. if we follow the said injection with lavage of the organism by the injection of the physiological solution of sodium chloride.

(2) While the minimum fatal dose of cocain muriate administered fasting by the alimentary canal is 3½ centigr. per kgr., one can, with lavage of the organism, administer as much as 5½ centigr. per kgr. without fatal result.

The maximum limit of tolerability could be much greater if the toxic substance were given in broken doses, as Sanquirico did, rather than in a single dose; but I refrained from experiments by that method, because poisoning by cocain, whether accidental or with criminal or suicidal intent, rarely takes place in broken doses.—*Translated for* THE CANADIAN PRACTITIONER, *from Giornale Internaz. delle Scienze Mediche, February, 1898, by Dr. Harley Smith.*

Selected Articles.

THE HYPODERMIC USE OF PILOCARPINE ALONE, AND ASSOCIATED WITH OTHER MEDICINES IN THE TREATMENT OF CERTAIN AFFECTIONS OF THE EYE.*

By Herbert Burnham, M.D. Tor., F.R.C.S. Edin., M.R.C.S. Eng.

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1.—I shall begin this paper by giving a very brief summary of one case of rheumatic affection of the eyes, one of acquired syphilitic irido-cyclitis, and one of gonorrhœal irido-cyclitis, so that we may have placed before us some of the data upon which I have based my conclusions.

I may here observe that it is solely with the treatment of these diseases that I am dealing.

Robert M., aged 48 years, was sent to me by Dr. Tucker, Orono, in the year 1890. The general condition was that of chronic articular rheumatism, and so much crippled was he that he walked into my consulting room with difficulty, leaning on two stout sticks. Exposure seemed to be the chief cause of the disease. The condition of the eyes was very grave. The centre of each cornea was thickly studded with small closely placed infiltrations, occupying a space larger than the pupillary area, but having a rim of clear cornea. In the left eye these infiltrations were undergoing undoubted calcareous degeneration. There was an iritic adhesion in one eye. Vitreous slightly hazy; no change in either fundus. R. eye: vision, a few letters of Snellen type for distance, No. xx. at six inches; and L., a few letters of No. xv. of the same type at six inches. He could not even guess the time on looking at the face of a watch with big figures and hands. The eyes first became affected three years prior to consulting me, and during this time there had

* Read before the Ophthalmological Section of the British Medical Association held at Montreal, August-September, 1897.

been inflammatory attacks, with subsequent deterioration of sight. He had been under the care of specialists, and though given very careful local and general treatment, the eyes had steadily gone from bad to worse. Iridectomy had been advised.

On putting himself under my care I at once began the hypodermic use of pilocarpine. He seemed to have received every form of treatment save this.

To begin with I used it every day for three weeks, the dose varying from gr. $\frac{1}{12}$ to gr. $\frac{1}{4}$ and a few times it was even larger. At the end of this period he could easily make out the time by an ordinary watch. He returned every six to eight weeks, and received each time seven to ten injections. From the beginning of the treatment there was an uninterrupted improvement, both as to the eyes and the general condition. Every six to eight weeks during 1890, 1891, 1892, 1893, and 1894 these injections were given. The vision gradually improved till in 1895 it was $\frac{20}{50}$. In April, 1895, an interval of almost one year, during which no treatment was carried out, his sight remained the same. The vision is now—that is one year ago, when last seen—$\frac{20}{50}$. He is now very active, and can run up and down ladders with great ease and quickness.

The hypodermic injections of pilocarpine were discontinued, as he could not attend any longer, and besides saw and felt so well that he was contented.

In his case the cornea did not further clear up after the cessation of the use of pilocarpine. I have observed that as long as an improvement is produced by the pilocarpine its use must be maintained if the improvement is to be continued; otherwise, with the cessation of its use, there is no longer any improvement. This non-progress does not mean relapse, it only means the progress established goes no further. This rule has, of course, exceptions, but my experience teaches me that in the main it is adhered to.

I shall now mention the case of syphilitic affection of both eyes treated by mercury and iodide of potash given internally and pilocarpine hypodermically.

2.*—July, 1894, a man, aged 30 years, was sent to me, suffering from acquired syphilitic inflammation of both eyes of at least nine months' standing. The treatment of the eyes during this period had been by mercury and iodide of potash internally, and atropine locally. However, the eyes had steadily got worse, till when I saw him the condition was as follows:

Left eye: much conjunctival and ciliary injection, pain at times,

* *Archives of Ophthalmology*, vol. xxiv., No. 3, 1895.

aqueous turbid, many lymph dots on the posterior surface of the cornea, very many posterior synechiæ, some being broad and dense with the deposit of a membrane of lymph in the pupillary area; V. = p. l. only.

Right eye: letters of No. xl. of Snellen type for distance at eight inches: cornea and aqueous very slightly affected, if at all; posterior synechiæ more numerous and broader, so as to be almost without a break, *i.e.*, so as to form almost one solid ring of adhesions, and the lymph deposit in the pupillary area thicker. I continued the mercury and the iodide. At the end of five weeks no improvement had taken place—in fact the eyes were worse.

I now made a change in the treatment, as follows. I still continued the internal use of mercury and the iodide of potash, and added pilocarpine, giving it hypodermically. This treatment was kept up for nine months, and the result at the end of that time was: right eye = $\frac{20}{40}$ and left eye = $\frac{20}{20}$. The deposit of lymph once markedly present in the pupillary areas seemed to be practically gone in the left eye, and much lessened in the right; and of the posterior synechiæ, some had given way, others had become so thinned that persistence in treatment was, I believe, only needed to cause all of them to snap asunder.

This case, I hold, has made manifest the superiority and value of the combined form of treatment, *i.e.*, of mercury and iodide of potash internally, and pilocarpine hypodermically, over the ordinary routine of mercury and the iodide of potash.

3.—My third case was one of very severe gonorrhœal iridocyclitis, with p. l. only: aqueous hazy, and many posterior synechiæ with exudation of lymph into the pupillary areas. Here atropine and leeching locally, with mercury and potassium iodide internally were used with benefit for ten days. Then there was a return of the severe pain, and the pupils which had dilated partially and irregularly, began apparently to contract, an appearance due to the presence of active inflammation of the ciliary region. I now added pilocarpine, giving it hypodermically, to the treatment, with immediate and marked benefit. The vision finally became $\frac{6}{9}$ correctly, though mistily, which latter condition was due to the thin lymph still lingering in the pupillary areas. This only requires further treatment to be fully removed. This, however, he has not as yet returned to receive.

From the foregoing brief account, and after careful observations upon the effect of the treatment, continued over seven years, I feel that I am justified in drawing favorable conclusions as follows:—

The first case narrated—and I have others of a like nature which strengthen my opinion—clearly shows, I think, the great and lasting benefit of the persistent use of pilocarpine given hypodermically in long-standing rheumatic disease of the eyes, and incidentally in the general rheumatic condition. I think that in this case the addition of the internal use of medicine would have been beneficial, but none was given.

The second brings markedly to our notice the brilliant and rapid improvement through the addition of pilocarpine used hypodermically. Here we see the gradual removal of long-standing and organized exudation, a most important and significant result. I wish also to draw your attention to the permanence of the curative effect; for never since the use of the combined form of treatment has there been any relapse.

The case of gonorrhœal irido-cyclitis, which under ordinary treatment would have, at the best, left the vision much impaired, showed under the combined treatment immediate improvement; and I am confident that by persistence in the treatment normal vision would have resulted through the removal of the exudation.

My method of administration is as follows:—The mercury I give in the form of pulv. hyd. cum creta and pulv. Doveri made into pill mass and put into capsules. This is given before eating, and the iodide after eating. My procedure regarding the pilocarpine is as follows:—I give it in the afternoon and keep the patient in the house afterwards, not allowing him to leave it till the next day, when in suitable cases he can go out and take exercise, sometimes even follow his occupation. Just prior to giving the injection he is put to bed, lying between flannel sheets and dressed in a flannel suit. The temperature of the room is about 75°.

The covering over him is a blanket well tucked in. In a few cases where, under the influence of the drug, the feet become cold, I place a warm bottle to them. The patient also holds to his mouth a large cup to catch the saliva that flows freely. The solution is pilocarpine muriat. gr. v. aq. destill. ʒi., *i.e.*, gr. $\frac{1}{4}$ to *m*iii. It is injected into the forearm, and the amount being small in quantity makes the subsequent tenderness very slight. He remains in bed for one and a-half to two hours, and, on getting up, is wiped down with warm towels, and is then free to go about the house, but not to go out till, in suitable cases, the following morning.

Eight weeks I have found clinically to be the longest interval between each group of injections that can be profitably allowed, and three weeks the shortest. But this latter interval is only made

use of in the beginning of the treatment. Later on the interval is extended to six or eight weeks. It is very necessary, indeed, not to cause intolerance of the drug, but at the same time important to use it as fully as it can be borne. In retinal and retino-choroidal affections I feel that the combined method will be found in a certain proportion of cases to be more reliable and satisfactory in its results than the remedial measures now used.

In a few cases of optic neuritis, with copious exudation, it has seemed to accelerate absorption. The action of pilocarpine appears chiefly to be upon the nervous and absorbent systems, and hence the intensifying of the action of other medicines when it is associated with them ; and also the necessity of a careful routine such as I have indicated during its administration.

The combined form of treatment, having been found so useful in the diseases of the eye above mentioned, should be of equal value in the treatment of other parts or organs of the body that may become affected by the same diseases, and where what may be termed the usual remedies have failed to be of service.

However, there is one intractable affection of the eye in which I have not had the opportunity to try the combined treatment, *i.e.*, sympathetic ophthalmitis. I have a feeling that it should be of signal benefit in this disease. My own faith in this combined form of treatment is now so established by reason of its uniform success that I consider myself justified in recommending it with confidence to the favourable consideration of the members of the medical profession.—*Review of Opthalmology.*

Progress of Medicine.

OBSTETRICS

IN CHARGE OF

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Hunterian Society.

The Hunterian Oration was delivered before the society by Dr. Peter Horrocks, who gave William Hunter's description of the placenta of 100 years ago, and showed that in its essential features it was identical with the latest description, namely, that given by Professor Leopold, of Dresden. He pointed out that the maternal and fœtal circulations were quite separate and distinct, although the two bloods were brought into very close contact, and that there was no nerve connection between mother and fœtus. He then described the ovum and the sperm. Many illustrations were shown on the screen by means of limelight lantern slides. He discussed the heredity of an individual derived from the germ, and also from the sperm, and then showed that the united germ and sperm was influenced by the mother through her blood causing the growing embryo and fœtus to be modified in such a way as give it additional heredity, which might be called intra-uterine maternal heredity. He showed how this might be modified by conditions in the mother herself, such as food, work, environment, and disease. He showed that there was good reason for believing that poor living and hard work tended to produce males, whilst high living, especially abundance of fat, warmth, and leisure, tended to produce females. The

statistics of the Guy's Lying-in Charity, taken entirely amongst poor people, and collated by the late Dr. Braxton Hicks, Dr. Galabin, and himself, showed the ratio of 100 boys to eighty-nine girls, whilst our own Royal Family showed in the Royal Blue Book that out of fifty-four descendants of the Queen thirty were girls and twenty-four boys, the ratio being 100 girls to eighty boys. Dr. Horrocks then dealt with the subject of syphilis, and showed that the ovum in the ovary, the fertilized ovum *in utero*, and the embryo and fœtus *in utero*, might each one become syphilized through the mother. The subject of maternal impressions was mentioned, and details of published cases were given, but on the whole it was doubtful if they could be accepted as scientific, and from the numberless instances where mothers during pregnancy were profoundly affected by some great fright or other emotional disturbance, and yet no result whatsoever was manifest in the child, it was very unlikely that the fœtus ever was or could be affected in such a manner. The total absence of all nerve connection between mother and offspring *in utero* bore out the same idea. The effect of the united germ and sperm, and of the growing embryo and fœtus *in utero* upon the mother was then described, and it was shown that there was very good reason to believe that the mother was affected through the contiguity of her blood with the offspring by the father of her child, through the sperm, and that therefore a wife who became a mother was so affected by the father of her child as to show such influence upon succeeding children by a different father. The subject of transmutation in transmission was discussed, and also the question of heredity of diseases now said to be caused by microbes.—*British Medical Journal.*

Abdominal Section as a Medical Measure.

Mr. Frederick Treves (*Br. Med. Jour.*) concludes a paper on this subject in the following words:

In conclusion, I cannot avoid one word on the subject of this self-same exploratory incision. That this simple procedure has been of enormous value no one will doubt; that it has been the means of saving many a life has been amply demonstrated; that it has enabled a correct diagnosis to be made and a logical treatment to be carried out in hundreds of obscure cases needs not to be insisted on; but there must arise in the minds of many the question whether the exploratory incision, infinite as its value may be, is an entirely unmixed blessing. I notice that there are indications which tend to allow this ready measure to replace the admirable labor of

clinical observation. The incision is so simple, the collecting and arranging and judging of clinical evidence is so difficult and tedious. With a scalpel in the hand, the patient, searching examination of the abdomen as practised in older days is no longer needed, and it is a question whether the education of those who wish to become acute clinical observers has not suffered a little thereby.

The Treatment of Vaginitis and Endometritis with Lactic Acid.

W. Ilkewitsch (*Antr. f. Gyn.*, Oct. 30th, 1897) gives an account of his experiments with lactic acid in the treatment of vaginitis and endometritis. He bases his claim for therapeutic value of this agent upon the following observations made by himself and other clinicians: The acidity of the vaginal secretions is due chiefly to the presence of lactic acid, which is either a product of bacillus dœderleini or of the physiological activity of the vaginal walls, or both. He lays stress upon the fact that in 99 out of 100 cases, when the vaginal secretions are distinctly acid, pathogenic micro-organisms cannot be found therein, or if so their virulence is markedly impaired. In the secretions of the normal vagina of a pregnant woman 0.4 per cent. of lactic acid was found. The growth of the streptococcus pyogenes was inhibited when the bouillon culture contained 0.1 per cent. of lactic acid, though the staphylococcus pyogenes required 0.4 per cent. before it yielded.

The author irrigates the vagina with about 800-1000 c.c. of a three per cent. aqueous solution, and claims to effect therewith a complete destruction of all micro-organisms present. To cervical erosions and uterine mucosa he applied the remedy in strengths varying from 50 to 100 per cent. From a careful study of a limited number of cases he draws the following conclusions: (1) That the topical application of lactic acid to the endometrium markedly diminishes the amount of fluor albus; (2) that irrigations of the vagina with a three per cent. solution destroy saprophytic and pathogenic micro-organisms and cure colpitis; (3) that the same solution removes unpleasant odors; (4) changes the color of the discharge from yellow-green to white; (5) that it is a safe remedy in ambulatory cases, even with an existing salpingo-oophoritis; and (6) the remedy will, in many cases, replace curettage.—*Am. Gyn. & Obs. Jour.*

MEDICINE

IN CHARGE OF

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Intestinal Features of Typhoid Fever.

Osler (*Phil. Med. Jour.*, Jan. 1st, 1898), contributes an excellent article on the above subject. He says that "the severity of the symptoms of typhoid fever bears no relation to the extent or intensity of the intestinal lesions." He characterizes the plan of treating the disease as of an enteric rather than of a systemic nature as being "wrong in the worst possible way, in principle as well as in practice." There may be localized pain in the right iliac fossa, and several appendicectomies have been done because of mistaken diagnosis.

With regard to early purgation, he says: "While gentle laxatives are not specially contra-indicated, yet I think free and active purgation at the outset of the disease is decidedly harmful," and he commends Graves' remark that "patients who have escaped active purgation before admission to the hospital get through the disease with little or no tympanites."

For many years past his practice has been "not to disturb the bowels in the course of the disease with the exception of a few doses of turpentine for tympanites, or measures directed against hæmorrhage or active diarrhœa." He occasionally gives castor oil for the constipation of convalescence, but never uses the so-called intestinal

antiseptics, nor purgative salts. If the bowels are at all constipated he gives injections, or dilutes the milk and increases the amount of albumen water. His experience has taught him that the cases with constipation do better than those with diarrhœa. Meteorism is usually an accompaniment of diarrhœa and is rarely present with constipation. It is of grave omen and hard to combat. Diarrhœa during convalescence is usually due to persistence of ulceration in the large intestine and may prove very intractable. Of his last ninety-nine cases four died and none of these from any intestinal complication. He used no measures directed either to disinfection of the bowel or to the removal of supposed irritants, etc. "Calomel, mercuric chloride, Yeo's chlorine water, salol, creosote, guaiacol, beta-napthol, benzo-napthol, and the shot gun compound of Dr. Woodbridge are now much in vogue, and this at least can be said—that they probably do no harm." The typhoid bacilli do not multiply and develop their poison to any considerable extent in the intestinal contents themselves and such measures are not indicated, and his results with the non-interference plan have been quite satisfactory.

He uses very vigorous language in speaking of the Woodbridge treatment, and scores Dr. Woodbridge's book most severely. "Every intelligent physician," he says, "must be impressed first with the crude unscientific character of his work and with the ignorance everywhere displayed of the nature of typhoid fever; and, secondly, with the persistent vaunting of a specific or cure-all for it. Dr. Woodbridge is a devoted, earnest man, who honestly believes in his plan—but until the presentation has been made in a very different way, I can no more accept his statements than those of any other misguided enthusiast who has been fortunate enough to have his wares exploited in the profession by a drug house of repute."

Post-Typhoid Fever.

J. M. DaCosta (*Phil. Med. Jour.*, Jan. 1st, 1898) refers to cases often met with after an attack of typhoid fever in which the temperature, which may have become normal, rises again and persists for an uncertain length of time. He suggests the name post-typhoid fever for the condition, and warns us not to confound it with true relapse or with cases in which some local condition, such as phlebitis, periosteal lesions, local pleurisy, nephritis, otitis, bed-sores, boils, constipation, unhealed ulcers with diarrhœa, or a dysenteric state, is the cause of the febrile condition. The fever is of very moderate

character, continuous, and without marked remissions or changes, and usually lasts eight or ten days, though it may persist much longer. The most peculiar feature of those post-typhoid fevers consists in their being continuous or nearly so with the original attack, and not setting in like true relapses after a period of ten days or more. There are no other symptoms than the fever—no fresh eruption of spots, enlarged spleen, or diarrhœa.

Transitory rises of temperature may, it is true, result from indiscretions in diet, but the frequency of this cause is greatly over-rated. Mental emotion may also cause a rise in temperature of short duration. But, eliminating all those conditions, there yet remains to be explained cases coming on at the end of the typhoid attack in which everything else points to convalescence but fever springs up unaccountably and of uncertain duration.

This post-typhoid fever beyond being a source of great uneasiness to patient, friends and physician, does not lead to any serious consequences. Its cause is uncertain. DaCosta is inclined to think that the fever is neurotic and to be explained by the ill-nourished heat centres having been so long disturbed that they have become unstable—a kind of fever habit being developed in them, which is not easily shaken off. The anæmic state may, however, assist in its production.

The best means of treating such cases is by cautiously but rapidly improving the diet, giving easily assimilated tonics such as the lighter preparations of iron and strychnia, and, above all, by getting the patient out of bed and rapidly increasing the time he is to sit up daily. Temperature observations should be made as seldom as is consistent with the necessities of the case. It is, says the author, surprising how soon the fever stops under this plan of treatment, no matter what may have been its length.

THERAPEUTICS

IN CHARGE OF

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Artificial Serum in Toxæmia.

There is a steadily growing body of testimony as to the value of subcutaneous injections of artificial serum in eclampsia and all cases of toxæmia. The best fluid for injection seems to be a modification of Ringer's fluid as advised by Edes (*Boston Medical and Surgical Journal*, March 4th, 1897.) It consists of:

Calcium chloride.....0.1 gramme.
Potassium chloride.....0.75 grammes.
Normal salt solution.....1.000 c.cm.
(75 per cent. solution.)

The fluid should be injected slowly into the cellular tissue, not into a vein. Absorption from the cellular tissue is very rapid, and the injection is not accompanied with the same danger as in direct injection into a vein. The method is worthy of a wide trial in toxæmia, and especially in uræmia, and seems to offer a chance of recovery to many almost inevitably fatal cases.—*The Practitioner.*

Care of the Teeth.

The following directions, taken from *The British Journal of Dental Science*, are evidently written by a practical man:

"In addition to the use of a suitable tooth-brush and tooth-powder on the teeth, there is no practice which commends itself so highly as the use of a piece of silk thread. It will take the average person some time to become expert in handling it; but when this

is attained, it will be acknowledged the best toothpick and beautifier of teeth in the world. Cut off from the reel a piece of silk about fifteen inches long, which thoroughly wax. With the thumbs and forefingers carry the waxed floss silk into each space between the teeth, the remaining three fingers of each hand being used to hold on to the ends of the silk firmly. The thumb and forefinger of each hand, as they hold the silk, should be kept but a very little farther apart than the width of the teeth between which the silk is to be passed. Thorough tension of the silk must be kept up at all times. For the eight teeth on the left side of the upper jaw, pass the silk over the end of the left-hand thumb and over the end of the right-hand forefinger. Thus the palm of the right hand and the back of the thumb of the left hand will be toward the face. Hold firmly, slide it between the teeth with a gliding motion; carry it well down between the necks of the teeth and the free edges of the gums, but not in such a manner as to wound the latter, the pressure being properly brought against the teeth, not against the gums. Before sliding the silk from between the teeth, the silk may be rapidly drawn backward and forward on the necks of the teeth, thus polishing and preserving these surfaces, and 'raking out' any deposits of food or incipient tartar which may be there. The silk should be slid from between the teeth with the same tension as when it is introduced between them, otherwise it will tear when the teeth are very close together. If this rule be observed and the silk still tears, it indicates one of several conditions—a cavity of decay, a scale of tartar, or a sharp point or jagged edge of the tooth, any of which conditions should be corrected by a reliable dentist."—*The Practitioner.*

Scarlet Fever.

Seibert (*Arch. of Ped.*, September, 1895) has found that inunctions of a 5 per cent. ointment of ichthyol have been followed by a most marked effect upon the local condition of the skin, producing decline of fever and improving the general condition. The swollen red skin shrinks and turns pale brown; the temperature falls 3° to 4° within two hours; and the nervous, itching, peevish child becomes quiet and usually goes to sleep. While he does not believe that the treatment has any specific effect upon the character of the general infection in scarlatina so as to change a malignant case into a mild one, he is convinced that the ointment applied in these cases destroys most of the bacteria causing scarlatinal dermatitis, and thereby materially aids in overcoming the general infection.—*The Practitioner.*

Fissure of Anus.

For the relief of painful anal fissure, Allingham recommends the following ointment:

Extract of Hemlock	5 grammes
Castor Oil	15 "
Lanolin	30 "

To be applied to the parts after each action of the bowels.—*The Practitioner.*

A Note on Trional.

A safe, efficient, and easily administered hypnotic is a distinct addition to our armamentarium, and as fulfilling these conditions, the result of a six months' constant use of trional may be of interest.

I have given it to produce sleep in cases of pneumonia, bronchitis, alcoholism with delirium, insomnia from mental worry, and other forms of nervous insomnia, and I have invariably found it satisfactory. It is rapid in its action, and it has these advantages over sulphonal or the bromides, that it is more certain and does not produce the disagreeable sequelæ of sleepiness, lassitude, and depression on the day following its exhibition. Nor have I observed any derangement of the digestive system in connection with its administration. An initial dose, gr. xx or xxiv, may usually be reduced to xv or less, and in this way trional becomes invaluable for breaking a pernicious habit of sleeplessness, where a few good refreshing nights may restore the normal habit of sleep. Even in cases of confirmed insomnia, which have been treated unsuccessfully by chloral, paraldehyde, and the whole gamut of hypnotics, each drug having in turn to be increased in dose until it finally loses all power or becomes dangerous, trional in my hands has afforded marked relief without apparently any ill effect, and has given tranquil, refreshing sleep without any increase of the initial dose.

One patient, a retired navy surgeon, a museum of complaints—mitral insufficiency, gout, eczema, albuminuria, and marked emphysema—who has had every known hypnotic for his obstinate insomnia, has been taking by my advice trional 15 to 20 grains for the last five months almost every night. He has never had to increase the dose, and I have never detected anything but a good result from his continued use of the drug. I am confident that his heart has much benefited by the regular sleep, and his nocturnal attacks of dyspnœa are now unknown. I find trional is easily taken in cachets or suspended in hot milk or water.—*J. Arthur Browne, B.A., M.B., in British Medical Journal.*

ORTHOPÆDIC SURGERY.

IN CHARGE OF

CLARENCE L. STARR, M.B. Tor., M.D. Bel. Hosp. Coll.,

Surgeon to Industrial Refuge.

Correction of Spinal Deformity by Manual Force.

Some time ago the attention of the readers of this journal was drawn to the fact that Calot, of Paris, had, by traction and manual force, succeeded in largely correcting the deformity resulting from Pott's disease, in quite a number of selected cases. Since that time surgeons in England and on the Continent have operated on similar cases with good results, but until recently the operation has not been attempted in America.

Dr. V. P. Gibney, Surgeon-in Chief of the Hospital for Ruptured and Crippled, New York, writes (*N. Y. Medical Journal*, Mar. 26th, 1898):

"At the Hospital for Ruptured and Crippled we are so familiar with the correction of deformity at the hip and knee, and even at the ankle, that the attempts at correction of deformity of the spine have not seemed especially hazardous, especially if one takes pains to employ absolute immobilization immediately after correction."

He also gives notes of three cases operated upon, two of them deformities following Pott's disease and one a case of rotary lateral curvature.

Case 1. M.D. Boy, 12 years of age. The history was vague, although it was reported that he had "spinal trouble" as long as he could remember. There was no history of any treatment. The boss occupied the lumbar region.

He walked very awkwardly, bending forward, and it was with difficulty that he could hold himself in an erect position. There was no psoas abscess, although there was some contracture of the psoas and iliacus muscles. All acute symptoms had long subsided.

The deformity was well marked before operation, and afterward, according to the tracings given, the spinal column was almost straight.

The operation took place on March 1st. Anæsthetic, gas and ether. Two members of house staff held the lower limbs, two the upper, and with a rest under the thighs and a broader one under the thorax, pressure was made over the boss. The parts yielded with a distinct noise heard all over the operating room.

Afterwards a close fitting plaster-of-paris jacket was applied in the recumbent position, especial care being taken to pad the parts where pressure had been made and also the bony crests of the ilium.

No interference with the respiration took place. No opiate was required and no sense of discomfort next day. There was no elevation of temperature, and patient was up on the third day and walking perfectly erect. The jacket will not be removed for several weeks.

Case 2. A.O.N. Age, 6½ years, suffering from Pott's disease, the boss occupying the mid-dorsal region. Had worn jackets nearly two years.

On March 8, was subjected to identically same treatment as in Case 1. The result was equally satisfactory, the deformity being almost entirely corrected.

The respiration was not interfered with to any extent. The pulse was a little irregular a few hours after the operation, but all irregularity stopped before morning. He required no opiate, had no rise of temperature, did not complain next day. The third day he was up and around.

Case 3. Rotary lateral curvature. High degree of deformity in dorsal region, which had existed four years. She was rather short in stature and presented a typical, classic hunchback. Early in January an attempt was made to extend the spinal column in a horizontal position on a frame, but owing to evidences of chloroform-poisoning operation was discontinued.

On March 8th with hip rest under the hip, and broader rest in axilla, with patient on left side, powerful traction was made by two assistants at either end, and manual force applied over deformity, resulting in forcing the spinal colunm into much better position, although the deformity was not fully corrected.

There was a gain of at least an inch in height.

The plaster-of-paris jacket was applied and there was no reaction whatever.

It was the intention of Dr. Gibney to repeat procedure within a week or two.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto; Surgeon to St. Michael's Hospital

ASSISTED BY

J. W. SMUCK, M.D.

Report of Provincial Board of Health for February, 1898.

Monthly Report issued by the Provincial Board of Health, showing the deaths from contagious diseases in the Province as reported to the Registrar-General by the Division Registrars throughout the Province for the month of February, 1898.

Total population of the Province, 2,263,492. Total population reporting, 1,519,768, or 67%.

	Population.	No. of deaths and rate per 1,000 per annum.						
		Scarlatina	Diphtheria.	Measles.	Whooping-Cough.	Typhoid Fever.	Tubercu-losis.	Total.
Cities reporting. 13 (100%)	432.675	6 (0.16)	11 (0.3)	0	5 (0.13)	6 (0.16)	55 (1.5)	83
Towns and villages, 236. Reporting. 167 (70%)	315,622	6 (0.2)	10 (0.38)	0	1 (0.04)	7 (0.02)	34 (1.3)	58
Townships 496. Reporting, 373 (75%).	771,471	3 (0.05)	17 (0.26)	9 (0.14)	4 (0.06)	6 (0.01)	44 (0.7)	83
	1,519.768 (67%)	15 (0.1)	38 (0.3)	9 (0.07)	10 (0.07)	19 (0.1)	133 (1.0)	224

Recommendation to Put the Maternity Boarding House Act in Operation in Toronto.

The Medical Health Officer has prepared his report in reference to the enforcement of the Act relating to maternity houses. After consultation with the Children's Aid Society, Sunnyside Orphanage,

Haven, St. Vincent de Paul Society, House of Providence, Salvation Army, and other institutions interested in the work, all of whom have promised hearty support in the event of the Act being put into force, Dr. Sheard reports:—"While I consider that the operation of the Act will not put a stop to child desertion, I think its tendency will be to decrease it, and am of the opinion that no reliable statistics can be obtained regarding the evils existing in connection with maternity houses, and children born therein, unless the Act be put in operation, and the working of this measure will not, in my opinion, be a serious expense to the municipality. I would, therefore, respectfully recommend that your board request the City Solicitor to prepare the necessary by-law declaring the Act to be in force within the municipality of the City of Toronto, and that the same be submitted to the Municipal Council for their adoption."

The Medical Man's Civic Duties and Responsibilities to His Community, State and Nation.

John Punton, M.D., in *The Alienist and Neurologist* says that much of the former influence wielded in the community by the medical men has been lost. The learned professions are now taking an inferior position in public estimation to that formerly occupied, and, therefore, it is interesting to see ourselves as others see us occasionally. Ex-president Cleveland criticizes the profession of to-day, and advises its members to take a deeper interest in public affairs and give the advice most needed to elevate the tone of public life. There are phases of sociology which every class of the community might well lend its best energies to improve.

The questions relating to insanity, common school education, matters relating to public health, the treatment of epilepsy, etc., demand attention which only especially trained minds can give. Mr. Cleveland says: "If laws were needed to abolish abuses which your professional investigations have unearthed, your fraternity should not be strangers to the agencies which make the laws. Let me also remind you of the application to your case of the truth embodied in the homely injunction 'If you want a job well done, do it yourself.' If members of your profession were oftener found in our national and state assemblies, ready to advocate the reformatory measures you have demonstrated to be necessary, the prospect of your bestowal upon your fellowmen of the ripened results of your professional labor would be lighter and nearer."

In Canada, the physicians who take a high rank in politics are too often those who have apparently forgotten the tenets taught

them in college, and instead of using the ability they have to further the cause of hygiene and public health, they become slaves to party expediency. The Provincial and Dominion Governments have done much to promote the public welfare in this direction, but as yet little or nothing has been accomplished by legislative enactment to stay the ravages of that insidious destroyer, the tubercle bacillus.

Our governments should be ready to hold up the hands of those who are trying to preserve the public health. Medical men in parliament should forget their party ties and endeavor to secure the enactment and enforcement of adequate laws along this line.

About a year ago the Medical Health Officer of Toronto undertook to enforce the law relating to the inspection of dairy herds, from which was obtained the city milk supply. The milkmen waited on the Government in a body and secured the withholding of the law for another year.

The question now naturally arises, what is going to be done? Are the ministers too busy to consider this matter? The two thousand, and over, physicians in this province can do a great deal to educate people along this line, and to assist in electing those who will support legislation, from whichever side of the House it may come, thereby helping to fight the battle of sanitation against every form of pecuniary opposition.

Leprosy Conference.

The following in brief are the conclusions of the Berlin Conference, October, 1897 :—

1. The bacillus lepræ of Housen is the virus of leprosy.
2. The mode of entry into the human organism is unknown.
3. Leprosy is a contagious disease, probably not hereditary.
4 Treatment has so far been unsuccessful.
5. Prevention is best secured by isolation.
6. Compulsory notification is recommended.

Next Congress meets in 1900, probably in Paris.

Editorials.

THE GOVERNMENT AND THE MEDICAL PROFESSION.

WHETHER from a lack of self-assertion on the part of its members or from a want of proper appreciation amongst men of other callings who have been handling the ropes, our profession appears to have been much overlooked in the active political life and government of Ontario. An able, energetic, well educated and popular man ought not to be any the less fitted to take a share in managing the affairs of the people because he is an active and successful physician or surgeon. He does not lose any portion of good sense, of knowledge of things in general, or insight into the wants of the people because he has superadded to these a knowledge of their bodily ailments and of matters connected therewith. On the contrary, many of the subjects which come up for discussion and direction by the Government have a relation more or less direct to the health interests of the people : markets, regulations regarding cattle and other domestic animals, milk, dairies and food supplies, drainage, water supplies, contagious diseases and the other numerous subjects with which the Provincial Board of Health deals ; vital statistics, the ventilation and sanitation of public buildings and institutions, the oversight of our hospitals, gaols, asylums, etc. So great is the number and importance of the subjects, some of which have just been enumerated, that the establishment of a portfolio of public health, either here or at Ottawa, has at times been mooted. Meanwhile the various sub departments dealing with these matters in the Province have been from time to time included in one or other of the Ministerial portfolios. Common sense would suggest, in the event of there being a vacant position in the Cabinet, that in making a selection from amongst a number of gentlemen equally well fitted by education and general knowledge and equally well informed as to the requirements of the people and the duties pertaining to an office, preference should be given to one whose train-

ing had given him special knowledge on certain subjects, such as those mentioned above. The profession has been recognized in the Governments of the Dominion and the other provinces, as witness Sir Charles Tupper and Dr. Borden at Ottawa, Hon. Dr. Parker in Nova Scotia, Drs. Harrison and Brett in Manitoba and the Northwest, besides many of our Lower Canadian brethren and others whose names will occur to our readers. Why should the case be different in Ontario, with her $900,000 spent on her asylums, hospitals and other eleemosynary work, besides the large amounts of money and property, and the large interests involved in public health work? Two of the members of the Ontario Government have failed to secure seats in the new House; we think that Messrs. Gibson and Dryden deserved better treatment at the hands of their constituents, but as these vacancies have occurred there will probably be a re-arrangement of portfolios. In such an event we trust the Government will not continue to overlook the medical profession, the members of which, coming into contact with all classes of the community, wield a wide-spread influence throughout the country.

THE DIRECTOR-GENERAL OF THE MEDICAL DEPARTMENT AND THE SERVICE.

THE recent appointment by the Dominion Government of Surgeon Lieut.-Col. Neilson as Director-General of the Medical Department should be of immense advantage to the service. Surgeon Lieut.-Col. Neilson is the senior officer of the medical staff. He has had great experience, and has been connected with the force for over twenty-five years. He should make an excellent Director.

The medical department up to the present has been most severely neglected by the Government, no recognition whatever being given to the medical corps, and no allowance being made for regimental ambulance corps, either in pay, clothing or equipment. There are at present no medical staff corps, and regimental ambulance corps are, in the absence of a medical staff corps, an absolute necessity.

The different regiments having ambulance corps have to support these organizations out of their private funds, which is not right. At a first cost to the Government of say $300, an ambulance bearer company of four-stretcher sections could be established and properly equipped, while a yearly allowance of $104 would pay and maintain

the corps efficiently. Yet nothing whatever has been done, even when so small an outlay would so thoroughly equip a corps.

There are many other points of great interest, such as dress, rank (relative or substantive), title, etc., which are of vital importance, and to these points we do not wish at the present to refer. We will be glad to have an expression of opinion from the medical officers of the service on any point appertaining to the organization of the Medical Department.

A number of questions will undoubtedly arise in organizing the medical department to which the Director-General will have to give answers, and a few of them can be enumerated here.

Are two surgeons necessary to a regiment?

Should the formation of ambulance corps in the regiments be encouraged and placed on a pay footing?

Should ambulance corps, now existing as regimental accessories, be recognized or disbanded? Should army medical corps be organized?

How should army medical corps be officered?

Should the ambulance corps in the different districts be encouraged, paid, and given proper drill at the district camps by forming field hospital corps there and placing the same in their charge?

We are glad to know that the present Government is alive to the needs of the medical men, as evidenced by the above appointment. We sincerely hope that no change will be made until the views of the medical officers are obtained. Our columns are open for expressions of opinion, and these should be freely given, so that we may not be placed in the unenviable position of the medical corps in the Imperial service.

ISOLATION OF CONSUMPTIVES.

THE best place for a patient with tuberculosis is a well-ordered sanitarium with healthy and cheerful surroundings. This fact is now fairly well appreciated by the public as well as the profession. Dr. Bryce, the secretary of the Provincial Board of Health, in his last report, referred to the prevalence of the disease throughout Ontario and the high rate of mortality therefrom, and expressed the opinion that there should be a sanitarium for every county.

We are glad to know that the trustees of the National Sanitorium Association are well pleased with the prospects for the institution at Gravenhurst. We quote the following from the *Mail and*

Empire, April 4th : "Senator Sanford, of Hamilton, paid a visit last week to the sanitorium at Gravenhurst. He spent some time in making a careful examination of the institution. While there he selected a site for a cottage, a gift of a friend, who is donating some $2,000 for this purpose. This makes the third gift of this kind this year—the Frank Bull cottage, the Foresters' cottage, and the one for which the site has been selected by Senator Sanford. Some five additional patients were received in the institution within the past week, and from the numerous enquiries from different parts of the province there is every prospect that every available room will be occupied during the coming season."

ACCIDENT INSURANCE FOR PHYSICIANS.

THE question of insurance against accidents is well worthy of careful consideration by the members of the medical profession. We have reason to believe that the average income of physicians in Canada is now less than it has been for many years, perhaps less than ever before. The writer was lately asked : "How many doctors in Toronto are saving and laying by one thousand dollars a year?" He could not tell, but thought—not many.

The physician and surgeon in ordinary routine practice is especially liable to meet with accidents. Not only has he to encounter dangers from the run-away horse, the railway, the trolley, etc., but also those arising from septicæmia. A number of years ago a run-away accident caused the death of one of Montreal's leading physicians. Although he had a large and lucrative practice he had saved nothing for his family. Only a few weeks ago a run-away accident killed Dr. Snelgrove, of Meaford. At the time of writing Dr. Jessop, M.P.P. of St. Catharines, is seriously ill from a similar accident. We might give many other instances of serious accidents to members of our profession, causing death or serious injury, but such facts are sufficiently known to all.

The death roll from septicæmia in this province is large, including such names as those of McFarlane, Fenwick, Saunders, Gardner, etc. We all have a fairly correct idea of the number of physicians who have died from various forms of septicæmia during recent years; but probably very few of us have any adequate conception of the number who have met with accidents, accompanied or followed by septicæmia, which have seriously crippled them for some time. At the present time a leading physician of Toronto is recovering from a serious attack of septicæmia produced by an apparently

trifling cause; and yet only a small portion of the residents of the city know anything of the case.

Under the circumstances we consider it remarkable that the members of our profession are so careless about insuring against accidents. The great majority insure their property against fire, while only a small proportion, so far as our information goes to show, insure their bodies against accidents. We believe this should not be the case, because a broken thigh is quite as serious a matter both for a doctor and family as the destruction of a portion of his property by fire; while death from an accident is as great a calamity from a money point of view as the destruction of his house and furniture. We think, therefore, that every physician without independent means should carry an accident policy; and, at the same time, should be careful to deal with a reliable company, and have due regard to special clauses relating to septicæmia. In expressing these views with reference to accident insurance we have no desire to ignore the question of life insurance, which is of paramount importance. The receipt of twenty-five or fifty dollars a week by a physician who is incapacitated for work through an accident is rather *comforting* to the family. All things considered, we would be inclined to give life insurance first place, and, at the same time, give the accident insurance a *good second.*

THE INTERNATIONAL MEETING OF RAILWAY SURGEONS.

WE learn from Dr. Riordan, the chairman of the Committee of Arrangements for the coming meeting of this large international society, that considerable progress has been made in the way of organization, and that much work is now being done. The Toronto City Council has promised a grant of five hundred dollars to be used in assisting to entertain the visitors. The various railway companies of Canada and the United States will do their share especially in bringing delegates to and from this meeting. The meeting will be held July 6, 7, and 8. It is rather unfortunate that two other important meetings will be going on at the same time, viz., the regular session of the Ontario Medical Council in Toronto, and the meeting of Life Insurance Medical Directors in Montreal.

This will be the eleventh annual meeting of the Railway Surgeons' Association, and the first held outside the borders of the

United States. The other places of meeting have been Chicago, Detroit, St. Louis, Omaha, Galveston, Old Point Comfort, Denver, etc. The following extract from the constitution shows the aims of the society :

"The object of the association shall be to promote acquaintance and fraternal relations among railway surgeons, to secure interchange of ideas, and the adoption of the best methods of development and improvement of railway surgery, and to establish it as a special branch of the chirurgical art."

The meeting will be held in the Normal School buildings, St. James' Square. There will be an exhibition of surgical appliances in the gymnasium. At Chicago last year thirty-nine manufacturers had exhibits, and it is expected that about thirty will have representatives present this year. A daily journal, *The Railway Surgeon* will be published during the meeting. We indicated in our last issue the methods of entertaining which the local committee and the railway authorities had in view. We understand now that all the entertainments mentioned, together with the trip to Muskoka, are likely to materialize in a way that will be highly satisfactory to all the members and their friends.

Meetings of Medical Societies.

THE TORONTO MEDICAL SOCIETY.

THE regular meeting of the society was held in the council chamber on the 10th of March.

The minutes of the last meeting were read and adopted.

Dr. J. N. Elliott Brown presented a young man whom he had been treating for a sub-acute attack of rheumatism. His object in presenting the patient was not to call attention to the disease, but rather to the uncommon size of the man, who measured seven feet five inches in height. The patient was well formed and in good health.

Dr. Price-Brown read a paper on

PHARYNGEAL MYCOSIS.

This was a comparatively rare disease, and when it did occur it usually affected some part of the fauces. It had various appellations depending on the situation of the fungus, but usually went by the above title.

It was a parasitic disease, composed of small, whitish yellow growths, dense in structure, and projected above the mucous membrane upon which it grew. It belongs to the schizomycetes species of fungus, a term applied to a variety of vegetable organisms found in drains, garbage, bogs, etc. These fungi may be found in milk, urine and watery solutions containing organic matter after exposure to the air for any lengthy period. The microscope reveals the thread or rod-like cells of the leptothrix, imbedded in amorphous granules. If treated with Lugol's solution these bodies assume a bluish tinge, indicating the presence of starch. The cells vary in form according to the anatomical region from which they are removed. When the fungus appears on the surface of the mucous membrane it may be merely superficial, or it may be inserted in a wedge-shaped manner in the parenchyma. In the one it is simply

attached *en masse* to the flattened epithelium, and is homogeneously striated in appearance. In the other, where it penetrates deeply into the epithelium, the growth is dense and more granular; and the microscope fails to demonstrate the rod-like cells. When the mycosis enters still deeper into the crypts, the latter become dilated, and filled with a fungus growth and degenerated epithelium. In these cases iodine staining brings out the thread-like bodies colored blue, and also the masses of amorphous matter.

The original source of the fungus is still a matter of question. The leptothrix is frequently found in the mouth, and is innocuous; but a condition of impaired health would appear to be all that is required to secure the attachment and growth of the fungus to the pharynx. The peculiar feature is that although the bacteria may be present in large numbers within the oral cavity, they should scarcely find a nidus for development there, and should prefer the faucial region. Possibly the intense muscular activity of the mouth may act as a deterrent to the leptothrix attachment.

Impaired health is supposed to be a predisposing cause. Sex has little if any influence; neither has age.

Dr. Brown said that he had seen only four cases. The first was in a man aged 50, the second in a woman aged 40, the third in a man aged 30, and the fourth in a girl aged 19, whom he presented to the society.

The third was very interesting. Two years ago the patient had suffered from chronic antral disease. Before cure could be accomplished openings had to be made through the alveolus and also the canin fossa. In time there was complete cure, and the patient returned home. One year after the patient came to the city to be treated for a chronic sore throat, which he had complained of for several months. On examination no sign of the antral disease was to be seen; but the lateral regions of the pharynx, the tonsils and the base of the tongue were studded with spots of the fungus mycoides. There was possibly one hundred of them. In inquiring for a possible cause it was ascertained that the patient had worked during the winter in polishing cows' horns. Sometimes the odor from the horns was very strong; and it was after pursuing this occupation for several weeks that his throat commenced to get sore. Could the leptothrix have been existent in the dead matter of the horns, the essayist asked, and the disease have been produced by the leptothrix spores with the powder from the surfaces?

There were few subjective symptoms in this disease. It produces no inflammatory action. It causes a feeling of stiffness rather

than soreness. As the plant increases aud becomes scattered over a larger area, the movements of the pharynx become restrained, the muscles slightly stiffened, and partial dysphagia may result. A slight irritable cough may be produced. The fungus grows most luxuriant between the crypts of the faucial tonsils, next on the base of the tongue and lingual tonsil; then on the pharyngeal walls and last upon the pharyngeal tonsil itself.

Mycosis presents small creamy-white opaque masses projecting above the mucous membrane. They are soft and moist in appearance, but are not easily removed. They will stand a large amount of friction without separating their attachment. Usually a number of the plants are scattered over the area affected, varying in size from a pin's head to a millet seed or larger. There is no inflammatory areola around them. Sometimes they exist for years, presenting few symptoms of a distressing or injurious character.

Upon a hurried or casual examination, it might possibly be mistaken for diphtheria in its first stage. This could only be so when the nests are massed together; but even then the fact that it is non-febrile, undergoes no change, and is intensely chronic, should at once remove all doubt.

From sebaceous accumulations in the crypts of the tonsils it is easily distinguished, by the fact that the former only occur at the mouths of the crypts and are easily pressed out, while the leptothrix growth occurs indiscriminately independent of the position of the lacunæ; and can barely be removed by any amount of legitimate pressure.

There was little or no difficulty in making a diagnosis between this disease and tonsilitis. In pharyngeal mycosis there is nothing dangerous to life; and, as a rule, if left to itself, might last through a lifetime. It is quite probable that its long continuance might depress the vital forces and render the subject more susceptible to the influences of other diseases.

The treatment is the eradication of the plant. In a few recorded cases this has been done with facility; but in the majority careful and vigorous treatment has been required, and this has had to be persisted in in many cases for a long time before complete cure can be obtained. The tincture of iodine, silver nitrate, bichloride of mercury, calomel insufflations, have all been used with more or less efficacy. Chromic acid cauterization has its advocates. Curettement has also been recommended. None of these have met with as good results as the use of the galvano-cautery needle. It should be inserted directly into the fungoid deposit, and a number should be

done at each sitting. The use of cocaine would be required on each occasion; for although the cauterization would cause but slight pain, to do it effectually the parts should be kept at rest while the needle is being inserted. Hygienic treatment should always be insisted upon.

Dr. Ross asked if this disease had any relation to that which affects the gills of fish.

Dr. Brown replied that he did not know.

Dr. J. F. W. Ross reported some cases illustrating different phases of appendicitis, which will appear in May issue of THE PRACTITIONER.

Dr. F. Oakley asked how the diagnosis was made in the second case where the pain was on the right side.

Dr. A. A. Macdonald agreed with the essayist in regard to early operative treatment. Delay was dangerous. The so-called recovery in non-operation cases was not a permanent recovery. Referring to rupture following operation, Dr. Macdonald said it was not always easy to cure. Patients did not like to submit to another operation.

Dr. Wm. Oldright said that in his experience the point of tenderness was not always where the mischief was. He thought cases of rupture would be lessened in number if the same pains were taken to close the abdominal incision as is afterward taken to close the hernial opening. He was in favor of the layer by layer method of closing rather than *en masse*.

Dr. W. J. Wilson asked Dr. Ross if he could formulate any rules as to when an operation was necessary. Would he operate after the first attack, invariably? In the early days of his practice Dr. Wilson said the term inflammation of the bowels was a common one and used to inspire terror into the people. So that for any sudden abdominal pain at night the doctor was sent for. But people had got over the scare and night work had dropped off one-half. Now all these cases were being handed over to the surgeon.

Dr. McKeown spoke of his case which Dr. Ross had referred to in the paper. He (Dr. McKeown) did not think operation in that case was necessary. The patient was vomiting and had a good deal of pain, but there was not much elevation of temperature nor was the pulse much faster than normal. Yet on opening the abdomen a gangrenous appendix was found.

Dr. Carveth spoke of the difficulty of making a diagnosis between appendicitis and disease on the right side of the pelvis.

Dr. H. H. Oldright discussed the differential diagnosis between appendicitis and typhlitis.

Dr. Webster reported a case of sudden abdominal pain where he advised against operation; two weeks later the patient consulted another practitioner, an operation was done, the appendix being removed. The patient still complained of the same pain.

Dr. J. N. E. Brown asked the essayist in how many cases of recurrent appendicitis had he noted, on removing the appendix, that there had been primary rupture.

Dr. Harold Parsons referred to the differential diagnosis of appendicitis from biliary colic and suppuration in the gall bladder. This point had been strongly brought to his mind at Johns Hopkins Hospital. He was called suddenly to see a nurse who gave a history of repeated attacks of pain on the right side of the abdomen on going to work. There was a good deal of pain, marked rigidity on the right side, tenderness, and vomiting. This he thought was appendicitis, as did Osler and others who saw it. On opening up an intense degree of infection of the gall-bladder and gall stones was found, with adhesions all about, matting the omentum and intestines.

There was another case of interest: A patient came into the hospital with painful micturition and marked tenesmus. On opening, an appendiceal abscess was found behind the bladder.

In another case great pain was noted over the region of the liver. A long gangrenous appendix was found, with abscess formation on top of the liver.

Another point Dr. Parsons called attention to was the fact that pressure over one side would produce pain on the other, especially where adhesions were extensive.

Dr. MacMahon said that he had found a large number of cases go along well without operation.

His first twenty-two recovered without a death. His practice was to call in an abdominal surgeon, with a view to operation if that was considered necessary. There was a good deal of difficulty in persuading patients with the milder types of the disease to undergo operation.

Dr. F. N. G. Starr agreed with Dr. Oldright that the pain was referred in the early stage to the region over the central nerve trunks, consequently about the umbilicus.

After the inflammation had lasted some time the pain becomes localized over the organs affected. As to the advisability of operating in the early stage he was not prepared to go "the whole hog," owing to the fact that so many get over the first attack without operation and do not have recurrence.

Dr. Dickson referred to a case which had gone the rounds, having been treated for nervous dyspepsia. Finally one surgeon guessed at appendicitis, and operated, finding a thickened appendix.

Dr. Ross, replying, said that the patient in the second case, which Dr. Oakley had enquired about, gave a history of a previous well-marked attack; besides, a mass could be felt on the right side of the abdomen. He agreed that during the first few hours of an attack the pain was over the whole abdomen, but later it became localized. He favored the *en masse* suture in closing the abdominal incision. He had come to believe in operating as soon as the diagnosis was made. The cardinal symptoms were sudden pain in the abdomen, vomiting, tenderness on pressure, and rigidity of the right abdominal muscles. One never knew when recurrence would take place; it might be ten, twelve, fifteen or more years after.

In the diagnosis between this and disease of the right fallopian tube it was to be remembered that the latter condition was rare, apart from disease on the other side as well.

He thought the case reported by Dr. Dickson was neurotic. In reply to Dr. Brown's question, he said in nearly every case of operation, in recurrent cases, there was a scar showing sign of primary rupture having taken place at some earlier date. He thought biliary colic was not often taken for appendicitis. At any rate a section was called for. He believed Dr. McMahon would soon change his view on the question of operation.

Dr. G. Gordon reported a case. He had seen the patient eight years ago. The symptoms were those of flatulent dyspepsia. Later, neuralgia supervened over one eye, with muscular twitchings in the hands. Two years after the hands became numb. There was extreme headache. There was also vomiting after taking food. He had slight attacks of dizziness. Treatment was directed to the liver, stomach and bowels; still the symptoms persisted, the headache becoming very intense. The eyes showed well marked optic neuritis. The signs were those of cerebral tumor. Under large doses of the iodide of potash the symptoms almost disappeared, but only to return after some months. The patient then went abroad for a time with benefit. But he soon relapsed into a worse condition than before. The arteries were always extremely hard. There was no albuminuria. Later, aphasia became marked, but disappeared during the last six months of life. The patient became very irritable and hard to manage. His death occurred about a month ago. Dr. H. B. Anderson did the post-mortem. There was very marked atheroma of the arteries. Miliary aneurisms were universally found. All through the brain were found areas of focal softening.

This case was briefly discussed by Drs. Parsons, Wilson, and MacMahon.

The society then adjourned.

Book Reviews.

LECTURES ON THE ACTION OF MEDICINES, being the course of lectures on Pharmacology and Therapeutics delivered at St Bartholomew's Hospital during the summer session of 1896. By T. Lauder Brunton, M.D., D.Sc. (Edin.), LL.D. (Am.) (Aberd.), F.R.S., Fellow of the Royal College of Physicians, etc., etc. London: Macmillan & Co., Limited. Canadian agents.—A. P. Watts & Co., College street, Toronto.

In this day of the multiplication of medical works without reason, other than the personal advertisement of authors, it is a pleasure to pick up a work of the real worth of the one under consideration. The subject of Pharmacology and Therapeutics is altogether too much neglected by the practising physician, and the thorough works are too few. This is a subject that must be handled by a master to stamp it with authority. No mere tyro could compile such a work as this. The practical value is beyond computation.

It is impossible to review this volume as most works are reviewed, simply because the contents are the result of practical work, and based on scientific physiological and pharmacological knowledge.

The present volume and that of Fothergill & Murrell should be read by every practising physician. Therapeutics is the neglected subject to-day, but such works as these should make a change for better treatment, and after all what do patients require but scientific treatment? Study your cases and treat them, do not theorize, be practical and this is the work to help you.

We have to find fault with the binding and uncut leaves, but no one will begin this volume without cutting every leaf, while many another work would be discarded after cutting the first chapter.

A CLINICAL TEXT-BOOK OF SURGICAL DIAGNOSIS AND TREATMENT. By J. W. Macdonald, M.D., graduate in medicine of the University of Edinburgh; licentiate of the Royal College of Surgeons, Edinburgh; professor of the practice of surgery and of clinical surgery in Hamline University, Minneapolis, etc. One volume of 781 pages, with 328 illustrations. Price, cloth, $5 net; half morocco, $6.50. Philadelphia: W. B. Saunders, 925 Walnut street, 1898. Toronto: J. A. Carveth & Co., Canadian agents.

Still ar other book on surgery! Although the field in surgery would seem to be sufficiently well covered by such excellent works as those of Erichsen, Treves, Grieg Smith, Jacobson, etc., the author thinks there

is room for an up-to-date book on surgical diagnosis ; however this may be, we do not agree with him when he says that "surgical diagnosis up to the present time is not dealt with in any work that claims to represent the most recent surgical knowledge." We think it very efficiently dealt with in Erichsen, Treves, and other works. In giving the treatment of Colles' fracture the following appears : "A plaster-of-Paris dressing is often employed, but excellent results are obtained by using no splints at all." The latter part of this is undoubtedly true, but we think it a great pity that the former statement should be made, for the inference is that plaster-of-Paris would be correct treatment but unnecessary. Now, as the chief seriousness of this accident is the danger of long-lasting stiffness and painfulness of fingers and wrist, and as this can be avoided by allowing free movement of flexion and extension, abduction and adduction, we would consider plaster-of-Paris dressing a plan of treatment to be strongly condemned.

In the chapter on tumors of the scalp, many of the characteristic points which would enable one to distinguish between a sebaceous cyst and a fatty tumor are not mentioned ; and it is stated that an error in diagnosis is of no consequence, as the treatment of both is extirpation. For a book dealing specially with diagnosis we think this rather weak. A special chapter is devoted to the X rays. In this a very good account is given of the history of the discovery, the apparatus, and its uses in surgical diagnosis. The index is very well arranged and most comprehensive, but the context, although containing many good practical features, is capable of considerable improvement.

PATHOLOGICAL TECHNIQUE. A Practical Manual for the Pathological Laboratory. By Frank Burr-Mallory, A.M., M.D., Assistant Professor of Pathology, Harvard University Medical School ; Assistant Pathologist to the Boston City Hospital; Pathologist to the Children's Hospital and to the Carney Hospital ; and James Homer Wright, A.M., M.D., Director of the Laboratory of the Massachusetts General Hospital ; Instructor in Pathology, Harvard University Medical School. With 105 illustrations. Toronto : J. A. Carveth & Co., Agents. Philadelphia : W. B. Saunders, 925 Walnut St. 1897.

The student and the enquiring practitioner have long felt the want of a guide which would point out the safe paths in the shifting sands of pathological technique. Such a guide we have in this volume. A practical manual is at last practical. Outlined in a common sense way, the student is not bewildered with a mass of mere detail and assertion, but language and reason enables him to grasp the essential points. Dealing with all essential points, the greatest of accuracy is shown. While there is room for improvement, we do not hesitate to warmly recommend it to all students, and to practitioners who wish to further their studies in pathology.

Part I. deals with Post-mortem Examinations on adult and infant in a clear and practical way ; lacking only the fuller details of the external examination.

Part II., on Bacteriological Examinations, is the most logical introduction to such technique that we have. One is pleased at once by the absence of useless, obsolete and complicated apparatus and methods. In the division on bacteriological diagnosis there is an accurate account of essential points for recognition of the pathogenic bacteria, while in the division on clinical bacteriology the student will welcome reliable points for the quick identification of the more important forms.

Part III., on Histological Methods: the same careful judgment has guided the arrangement and reasoning, making it one of the shortest, clearest, yet complete outline for such work that could be placed in students' hands.

We are sorry that the authors did not see fit to deal more thoroughly with the division on clinical pathology.

We hope that it will receive the full recognition that it deserves.

THE PRACTITIONER'S HANDBOOK OF TREATMENT, OR THE PRINCIPLES OF THERAPEUTICS. By the late D. Milner Fothergill, M.D., F.R.C.P., physician to the City of London Hospital for diseases of the chest, etc., etc., etc. Fourth edition. Edited and in great part re-written by Wm. Murrell, M.D., F.R.C.P., physician to and lecturer on Pharmacology and Therapeutics at the Westminster Hospital and School. London: The Macmillan Co.; Canadian agents, A. P. Watts & Co., College street, Toronto.

It is rather a curious fact that writers of text-books on therapeutics are nearly all optimists, and we often fail to get the brilliant results from drug medication which they promise us. A few disappointments of this kind are apt to drive us to the opposite extreme, and the tendency to-day is rather toward pessimism. The young graduate is frequently splendidly equipped for making an accurate diagnosis but entirely at sea in interpreting the indications for treatment in the individual case. It is here that Dr. Fothergill's book, revised and brought up to date by Dr. William Murrell, will be found invaluable. Every therapeutic procedure is explained so far as it is possible to do so by reference to its physiological basis as well as the pathological conditions of the organs concerned.

Former editions of the work enjoyed a great popularity, and the advances made since Dr. Fothergill's death in 1888 have necessitated large additions to the text. Dr. Murrell has accomplished the task of revision in a most satisfactory manner, and has wisely preserved the original design of Dr. Fothergill as well as his happy style.

The young physician will find the work especially useful, for it is full of practical hints, which would otherwise be acquired only after years of experience. We know of no work on treatment which will better repay careful study, and we warmly recommend it to the profession.

It is practical books of this kind that should be purchased, read, and digested. It is not the number of volumes but the quality of those.

on the library shelves that indicate the physician's learning. We are sorry that so admirable a volume should be bound with uncut leaves. In this country we much prefer those cut at time of binding, but the Messrs. Macmillan have presented this admirable volume in clear, well-printed type, on excellent paper with stable binding.

Books received :

CHAPIN ON INSANITY. A Compendium of Insanity. By John B. Chapin, M.D., LL.D., Physiciann-Chief Pennsylvania Hospital for the Insane ; late Physician-Superintendent of the Willard State Hospital, New York, etc. 12mo., 234 pages, illustrated. Philadelphia : W. B. Saunders & Co. Toronto : J. A. Carveth & Co.

KEEN ON THE SURGERY OF TYPHOID FEVER. The Surgical Complications and Sequels of Typhoid Fever. By Wm. W. Keen, M.D., LL.D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia. Octavo volume of 400 pages. Cloth, $3.00 net. Philadelphia: W. B. Saunders & Co., Toronto : J. A. Carveth & Co.

ACCIDENT AND INJURY, THEIR RELATION TO DISEASES OF THE NERVOUS SYSTEM. By Pearce Bailey, A.M.,M.D., attending physician to the department of correction, and to the almshouse and incurable hospitals ; assistant in neurology in Columbia University, consulting neurologist to St. Luke's Hospital. New York : D. Appleton & Company. Toronto : G. N. Morang.

THE ANNUAL AND ANALYTICAL CYCLOPÆDIA OF PRACTICAL MEDICINE. By Charles E. Sajous, M.D., and one hundred associate editors assisted by corresponding editors, collaborators and correspondents, illustrated with chromo-lithograph engravings and maps. Volume I. Philadelphia, New York and Chicago : The F. A. Davis Company.

Medical Items.

DR. D. KINGSMITH has gone on a three months' trip to Europe.

DR. L. M. SWEETNAM, of Toronto, has gone for a trip to Mexico and the Southern States.

THE American Academy of Medicine, will hold its twenty-third annual meeting at Denver, June 4 and 6, 1898.

THE American Medical Publishers' Association will hold its fifth annual meeting at Denver, Col., Monday, June 6, 1898.

DR. D. THOMPSON, who practised in Cayuga for ten years, has removed to Hamilton, and is living in the house formerly occupied by the late Dr. George M. Shaw.

THE American Electro-therapeutic Association will hold its seventh annual meeting at Buffalo, September 13, 14, and 15, 1898, under the presidency of Dr. Charles R. Dickson, of Toronto.

DR. CHURCH and Sir Dyce Duckworth have been appointed Consulting Physicians, and Sir Thomas Smith, Bart., Consulting Surgeon to the Royal General Dispensary, Bartholomew Close.

DR. MILTON MCCRIMMON (McGill, '78), of Palermo, was elected April 7th, the representative for No. 7 division in the Medical Council of Ontario, in the place of Dr. George M. Shaw, of Hamilton, deceased.

THE American Medical Association will hold its fifty-first annual meeting at Denver, June 7-10, 1898, under the presidency of Brigadier-General George M. Sternberg, M.D., surgeon-general of the U.S. army.

CHAIR OF MEDICAL JURISPRUDENCE AT GLASGOW.—Dr. John Glaister has been appointed to the chair of Forensic Medicine in Glasgow University. Professor Glaister is a graduate of Glasgow University of nineteen years' standing.

DR. CHARLES CARTER, House Surgeon, New York Polyclinic Hospital, met with a serious accident while assisting in an operation recently, which developed into septicæmia. He recuperated in Toronto, and left to resume his duties on April 1st.

DR. N. MCL. HARRIS was seriously ill with typhoid fever for several weeks in Baltimore, where he had been spending several months work-

ing in the Johns Hopkins' labratories. He is now recuperating in Toronto, and, we are glad to say, is looking very well.

"AND," were the concluding words of the professor's lecture to the medical students, "do not promise too much. I knew a physician of real ability who promised a patient whose legs he had just amputated that he would have him on his feet within two weeks."

THE Council of University College have appointed Dr. Charlton Bastian, F.R.S., Consulting Physician to the hospital, and conferred on him the title of Emeritus Professor of Medicine and Clinical Medicine; and Dr. J. S. Risien Russell, F.R.C.P., Assistan Physician to University College Hospital.

THE OBSTETRICAL SOCIETY OF FRANCE.—The Obstetrical Society of France will hold its sixth annual meeting in Paris on April 14th and two following days. The following are the questions on the programme: (1) Application of Forceps to the Upper Brim in Flattened Pelves with the head in the transverse position; (2) Treatment of Placenta Prævia.

HONORARY PHYSICIANS TO THE QUEEN.—Surgeon-Major-General Charles Edwin McVittie, I.M.S., and Brigade-Surgeon-Lieutenant-Colonel Benjamin Franklin, C.I.E., I.M.S., have been selected for the appointment of Honorary Physicians to the Queen, in succession to the late Surgeon-General Sir W. J. Moore, and Surgeon-General W. R. Cornish.

THE vacancy among the surgeons of St. Bartholomew's Hospital, London, caused by the retirement of Sir Thomas Smith, Bart., under the age regulations, will, it is understood, be filled by the promotion of Mr. Walsham, the Senior Assistant Surgeon. This will create a vacancy for an assistant surgeon, for which the candidates are Mr. D'Arcy Power and Mr. James Berry.

MEDICAL CHARITIES IN NEW YORK.—It is stated by *The Medical Record* that the number of persons who received free medical and surgical relief at the hospitals and dispensaries of New York during the past year amounted to 49.7 per cent. of the entire population, and that fully 70 per cent. of this number were quite able to pay a medical practitioner at least a moderate sum for his services.

THE late Bishop Selwyn had a morbid taste for seeing death or the dead. This propensity was the subject of many a joke among his intimates, of which the first Lord Holland's was the best. When on his death-bed, he was told that Selwyn had called to enquire after him. "The next time Mr. Selwyn calls," said he, "show him up, for if I am alive I shall be delighted to see him, and if I am dead he will be glad to see me"

MEDICAL PRACTICE AT KLONDIKE.—British doctors who are thinking of Klondike as presenting a likely opening for medical practice should take note of the fact, announced in some American papers, that they will not be permitted to practise unless they have passed an

examination before the Board of Medical Examiners of the Northwest Territory at Calgary, of which Dr. Brett, of Banff, Northwest Territory, is registrar.

THE HUNGARIAN BALNEOLOGICAL CONGRESS.—The Hungarian Balneological Congress held its eighth annual meeting on March 27th and 28th, in Buda Pesth, under the presidency of Dr. Wilhelm Tauffer. Among the papers read were: The Treatment of Consumptive Patients in Sanatoria and Climatic Health Resorts, by Professor Adolf Onodi; The Balneotherapy of Heart Disease, by Dr. Franz Tausyk; and Hungarian Health Resorts, from the balneological point of view, by Dr. Josef Sumegi.

ILLEGAL PRACTICE.—Detective Wasson and Constable Boyd hav returned from East Ontario, where they had been on a tour of investigation. The result of their work was that A. H. Morgan, River Baudette, and D. L. Maclennan, Fournice, were each fined $25 and costs for practising medicine without a license. J. Quigman, Melrose, was brought up on the same charge, and remanded. Messrs. Wasson and Boyd return this week, as they have several other cases on hand.

PREVENTION OF TUBERCULOSIS IN FRANCE.—On March 14th the Chamber of Deputies passed a vote to the following effect: "In case of seizure of meat on account of tuberculosis, indemnities shall be paid to the owners who shall have conformed to the requirements of the law and to the regulations of the sanitary police. The total amount of the indemnity shall be equal to half the value of the meat seized in case of generalized tuberculosis, to three-fourths of that value in cases of localized tuberculosis, and to the total value if it is proved that the animal was not the subject of tuberculosis.

PECULIAR ACTION FOR DAMAGES.—A peculiar case occupied the Supreme Court at Auckland, New Zealand, for several days, Miss Baker suing Dr. Purchas for £500 damages for grafting more skin from her body than she alleged had been arranged for. It appears a Miss Houldsworth was severely burned, and Miss Baker agreed that Dr. Purchas should graft some of the skin from her body. Miss Houldsworth succumbed to her injuries. It was found that, although Dr. Purchas was a clever physician, he was too brutal in taking more of Miss Baker's skin than was absolutely necessary. Miss Baker was awarded $3,000.

LONGEVITY OF PHYSICIANS.—One of the most curious statistical records that has been compiled this century is that by Dr. Salzmann, of Essling, Wurtemburg, on the average duration of life among physicians. He found, in going over the ancient records of the kingdom, that in the sixteenth century the average duration of life among the class was 36.5 years; in the seventeenth century, 45.8; in the eighteenth, 49.8, and at the present time they reach the favorable average of 56.7. It appears from the foot-notes to the above that this very great increase in longevity is due to the disappearance of the "black pest," the introduction of

vaccination, and the great diminution in the number of typhus epidemics, three classes of diseases which formerly decimated the medical practitioners.— *Church Family Newspaper.*

QUEEN'S UNIVERSITY.—At the annual convocation of the University of Queen's College, April 7th, 1898, the degree of LL.D. was conferred upon Dr. Charles W. Purdy, of Chicago. Dr. Purdy is a Canadian, and a graduate of Queen's University, from which he received the degree of M.D. in 1869. He practised in the village of Hastings, county of Northumberland, Ontario, for three years, and went to Chicago in 1872. He soon achieved success in this city, and, after spending a few years in general practice, devoted special attention to Bright's disease and allied affections of the kidneys, and wrote certain text-books on these subjects, which are well-known to physicians in the United States, Canada, and Great Britain. Dr. Purdy's many friends in Toronto, Kingston, and other parts of Canada are well pleased at the action of his *alma mater* in conferring on him so high an honor.

THE HEALTH OF LORD SALISBURY.—Lord Salisbury's present indisposition is to be attributed to a desire to return to ordinary habits of work too soon after an attack of influenza. This disease, as is well known, often leaves behind it a condition of lowered health, in which the sufferer, although free from any definite diseases, is yet unable for some time to face the ordinary wear and tear of life. Every man has the fault of his qualities, and Lord Salisbury is one of those who cannot take things easily. So long as he remained officially responsible for the business of the Foreign Office, he felt bound to deal with the more important public business himself, and whenever this involved an interview of any duration with Ministers, secretaries, or other officials, he experienced a rise of temperature. The Cabinet meeting on March 11th was followed by great prostration, and on Saturday he was so seriously ill that more anxiety was felt with regard to his state than at any period of the acute attack. We are glad to be in a position to state that he has steadily improved ever since, and that this improvement was so marked by March 16th that Sir William Broadbent felt justified in allowing Lady Salisbury to leave for Beaulieu. It is fully expected that Lord Salisbury will be able to follow her early next week, when Sir William Broadbent also intends to start for a holiday in Italy. Experience has again and again proved that the only remedy for the depression of health left by influenza is complete rest of body and mind. Sir William Broadbent, therefore, had no alternative but to exercise his authority as a physician to prescribe to his distinguished patient complete abstention from work. It should be added that experience has proved also that real rest is followed by permanent recovery even in men who have reached a far more advanced age than Lord Salisbury. There is therefore every reason to hope that the Prime Minister will return from his holiday completely restored to health.—*Brit. Med. Journal.*

Obituary.

Dr. Charles West, of England, the well known author on diseases of children, died March 19th, aged 81.

Beaumont W. B. Dixie, M.D.—Dr. Dixie died suddenly at his late residence, Springfield-on-the-Credit, March 27th, 1898, aged 79. He was one of the oldest physicians in Ontario, having been engaged in practice for 55 years. For many years he was considered one of the leading physicians of the province, and had a very large practice in the southern part of the county of Peel. He was an excellent physician and readily inspired confidence in his patients, by whom he was much beloved. He was a good specimen of that old and cultured school of doctors in Canada of which but few are left ; and, apart from his professional standing, was a most charming and estimable man.

William Newcombe, M.D.—Dr. Wm. Newcombe died of pneumonia at his home in Sandwich, March 22nd, 1898, aged 69 He received his medical education in the old Rolph's School of Medicine, and received the degree of M.D. from Victoria University in 1865. He was at one time a well-known physician of Toronto, practising with his brother, Dr. James Newcombe, their offices being on the corner of Richmond and Church streets. After leaving Toronto he went to Victoria, B.C., where he practised for a time. He then removed to Sandwich, where he was engaged in practice for a few years. His funeral took place from the residence of his brother in law, Dr. E. J. Barrick, Toronto, March 25th.

Dr. E. Arnold Praeger.—Dr. Praeger died at his home, Los Angeles, Cal., March 6th, 1898, aged 43 He was professor of gynæcology at the Los Angeles Polyclinic, and clinical gynæcologist at the free dispensary. He was born in England, where he received both his preliminary and professional education. He became Lic. Plys. and Surg., Glasgow, and Lic. Soc. Apoth., London, 1883. He came to Canada in 1886, and practised in Nanaimo, B.C., for a number of years. He soon became known as a skilful gynæcologist and abdominal surgeon. He attended some of the meetings of the Canadian Medical Association, and thus became known to many physicians of Eastern Canada. He was also a prominent member of the American Association of Obstetricians and Gynæcologists. He went to California in 1893, partly on account of the delicate health of his daughter, and settled in Los Angeles, where he practised up to the time of his death.

THE

CANADIAN PRACTITIONER

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MANAGER ADVERTISING DEPARTMENT:
MR. W. LLOYD WOOD.

PUBLISHERS :
THE PRACTITIONER PUBLISHING COMPANY,
TORONTO.

VOL. XXIII.] MAY, 1898. [No. 5

Original Communications.

APPENDICITIS—ITS CLINICAL ASPECTS.*

BY J. F. W. ROSS, M.D. TOR.,

Professor of Gynæcology, University of Toronto; Professor of Gynæcology and Abdominal Surgery, Woman's Medical College; Surgeon to St. John's Hospital, Toronto General Hospital, and St. Michael's Hospital.

THE following clinical histories of some of my recent cases represent different phases of appendicitis :

Case No. 1. Mr. S. Operated on February 8, 1898. Never had inflammation of the bowels before. Patient was taken ill on Sunday night, February 6, with pain in the abdomen and vomiting. The pain was chiefly localized on the right side. On Monday he lay around on the lounge. I saw him on Tuesday morning, February 8, found him lying on a sofa.

* Read before the Toronto Medical Society.

On examination of the abdomen there was marked rigidity of the right abdominal muscles, tenderness on pressure midway between the anterior superior spinus process of the ilium and the notch on the under surfaces of the liver, beneath which lies the gall-bladder. The tenderness over this spot was marked. He thus had the four cardinal signs of appendicitis, namely, *rigidity of the right abdominal muscles*, *tenderness on pressure*, following an attack of *sudden*, *severe pain*, and *vomiting*. On Monday night a severe chill supervened, he shook till his teeth chattered. On Tuesday morning temperature was about 100 and pulse about 100. Face looked anxious. I advised immediate operation.

He was moved in three miles from the country to the Toronto General Hospital. At four in the afternoon, assisted by his physician, Dr. Gee, I opened the abdomen an inch and a half above Poupart's ligament by the oblique incision. Found the appendix adherent to the under surface of the liver; it was gangrenous and filled with pus, but *had not burst*. It was carefully removed in the usual way and the wound closed. No drainage tube was inserted. Patient made an excellent recovery.

On examination of the appendix I found it to be about four inches in length. At a point about an inch and a half from the tip the lumen was found constricted and the tip dilated. This dilatation was filled with very offensive grumous pus. A gangrenous condition was present and the blood vessels in the mesentery were filled with blood clot, showing complete stagnation of the circulation in the black portion. The rest of the appendix looked in a healthy condition. There was no foreign body found. (Specimen shewn).

This attack was the first from which the patient had suffered.

Case No. 2. Mr. J. Referred to me by Dr. Noble. I saw the patient during his fifth or sixth attack and advised operation. He looked pale, and told me that he had never thoroughly recovered his health after the first attack. The attacks had been coming on at short intervals of a few weeks. The curious feature in this case was that the pain was chiefly referred to the left side, so much so that a layman, a friend of the patient, was quite anxious to be admitted at the time of the operation for fear that a mistake had been made in the diagnosis.

I opened the abdomen above Poupart's ligament by the oblique incision on the right side. After considerable difficulty I found the appendix turned downwards and backwards and covered by adhesions and completely bent on itself about its middle. The tip seemed to be in a very atrophic condition as a consequence of some previous attack. It was removed in the usual way.

On examination of the specimen I found the appendix to be about two and one half inches in length. At a point about half an inch from the tip was the site of the original perforation, the tip having been almost completely severed from the rest of the appendix. At a point one inch from the tip the appendix was found completely doubled on itself. (Specimen shewn).

Case No. 3. Mr. W. Patient had several severe attacks, very nearly lost his life in one of them. Opened the abdomen above Poupart's ligament on the right side. Found omentum adherent to cæcum and two points at which cheesy matter was to be found, one on the outer side of the cæcum and the other on its inner and lower side. The points on the outer side, when peeled off, revealed a perforation of the cæcum ; this was closed. The point on the inner side was found, peeled off and the appendix was found imbedded in a mass of adhesions in the centre of this cheesy material. It was removed in the ordinary way.

On examining the appendix it was found constricted though not completely shut off towards the bowel. The end was found distended and filled with grumous pus. The mucus membrane of this cavity was thickened and granular. (Specimen shewn).

Case No. 4. Mr. H. Referred to me by Dr. Harris. Patient had several attacks of appendicitis and when I saw him first he was just recovering from an attack. The case had been diagnosed by one or two physicians as a case of tubercular peritonitis, but his attendant physician claimed that it was a case of appendicitis. We advised him to wait for two or three weeks for operation until the sub-acute peritonitis should subside.

On examination the abdomen felt as if there was a small quantity of ascitic fluid present, intestines somewhat distended with gas and the wall of the abdomen had a peculiar *far-away feeling* that is so frequently noticed in cases of tubercular peritonitis. After two or three weeks this condition changed, the abdomen became flat and localized tenderness could be distinctly made out in the right iliac region.

Opened the abdomen to the right of the right rectus muscle by the vertical incision. Found the omentum and peritoneum very much reddened, the intestines adherent with adhesions that easily broke down, as they were evidently recent. I uncoiled the folds of the small intestine and peeled out the large intestine, cæcum and ascending colon from a bed of adhesions. I removed a large and long appendix. The bleeding from the intestines was free and one coil of intestine had to be kept pressed with hot compresses while the stitches were being introduced.

On examination the appendix was found with a constriction; beyond the constriction a dilatation that was filled with pus, together with a foreign body composed of hard fecal matter. Patient made a good recovery. (Specimen lost).

Case No. 5. Mr. S. A week before I saw him the patient complained of sudden severe pain in the right iliac region. The pain continued. Temperature became elevated but the pulse was not much affected. There was no vomiting. He did not improve in his condition and the pain did not disappear; on this account I was sent for.

On examination I found tenderness on pressure midway between the anterior superior spine of the ilium and the ensiform cartilage. No definite mass could be made out under the hand and there was no marked rigidity of the right abdominal parietes. I felt satisfied, however, that there was some serious change that had taken place inside in connection with the vermiform appendix and that the patient would be safer after an operation than if left alone. I told him that he would be safer with his appendix in a bottle and that he could choose for himself. He decided to have it removed.

Operation was performed in the usual way and the appendix was found with a large pinkish tinted fat-filled mesentery freely moveable in the abdominal cavity just under the point of greatest tenderness on pressure. It was difficult to find it at first owing to the fact that it was very high up and that it curled forward in front of the cæcum, on a level with, or a little above, the navel. The fat of the mesentery had an œdematous appearance as if filled with inflammatory exudate. Appendix was removed in the usual way. Patient made an uninterrupted recovery.

On examination of the appendix it was found to contain a foreign body in the shape of hardened fecal matter. After hardening it with formaline I made an incision into the fat and found an area commencing to break down. On examination from the appendiceal side a small perforation was found leading into this fat.

Owing to the fact that the perforation had not taken place into the abdominal cavity the symptoms were not as severe as usual Had no operation been performed I am satisfied that in a short time pus would have formed in the mesentery of the appendix and that it would, in all probability, have perforated into the abdominal cavity and have given rise to the symptoms of *so-called secondary rupture.* (Specimen shewn).

Case No. 6. Mr. V. Patient suffered from several attacks of appendicitis, one of them very severe, from which he nearly lost his

life. Did not recover his health; remained pale and anæmic. A thickening could be felt before operation.

Opened the abdomen to the right of the right rectus muscle by the vertical incision. After a great deal of searching found the appendix imbedded in a mass of adhesions upwards and outwards on a level with the navel. Stripped off the adhesions and finally isolated the appendix. Removed it in the usual way. There was no pus found. Recovery.

On examining the appendix found the seat of the old perforation about three-eighths of an inch from its tip. The tip remains like a knob almost broken off. The remainder of the appendix did not show any very great change except that it was very patulous up into the intestine. (Specimen shewn).

These cases, however, will illustrate the operation of appendisectomy when performed in the earliest stage of the disease and in the interval between intermittent attacks. I have yet to lose the first case after operation performed in the interval between attacks. Some of these operations have been very difficult, involving a large amount of handling of intestines, the closure of intestinal perforations, and the clearing out of cheesy material and pus in small quantities. The success of the operation, when done early in acute cases, has also been very great. In some of the cases I have found it impossible to remove the appendix and been forced to do nothing but make an incision down over the gangrenous tissues and pack the wound with gauze. These cases have also done well.

But a different tale is to be told regarding those in which medical treatment has been relied on and the dark wall of the abdominal parietes has remained as a barrier between the eye of the observer and the pathological change within. I am tired of the so-called medicinal treatment of appendicitis. I feel satisfied that, with proper precautions, five hundred healthy appendices can be removed without a death in the hands of a skilled operator. When this is so and the four cardinal symptoms that I may again enumerate, namely, *sudden pain in the abdomen*, *vomiting*, *tenderness on pressure*, and *rigidity of the right abdominal parietes*, distinctly point, almost infallibly, to appendicitis, surely medicinal treatment should be shelved. If I myself had the four cardinal symptoms I should send for a surgeon to open my abdomen.

The *so-called secondary perforation* in my experience most frequently means *rupture of a gangrenous and distended appendix, or the rupture of an abscess in the mesentery of the appendix secondary to a perforation into the mesentery.* After rupture has taken place the

organ quickly contracts and it is impossible to say, on examining it, that it has been much distended.

Case No. 1 would have been placed beyond surgical aid in a few hours by rupture of his appendix and the discharge of the foul and poisonous contents into the peritoneal cavity. Case No. 5 would, in a few days, have been placed in a similar position by rupture of pus formed in the mesentery of the appendix from broken-down fat cells, into the general peritoneal cavity. Operation cannot be done too quickly.

I saw one patient in consultation with Dr. McKeown, at St. Michael's Hospital, and within an hour we had the patient's abdomen open. Gauze was packed around the appendix and the swollen gangrenous organ lifted up. Just as it reached the level of the skin it burst, and the grumous pus fell on the protecting gauze instead of dropping into the peritoneal cavity. The patient's life was saved.

When the public is educated by the profession to the necessity of early surgical interference, the death rate from appendicitis will be materially reduced. To hear the argument that a certain doctor has treated so many cases medicinally and that they have all recovered, indicates that he has had but slight experience. Surely such an argument is offset by the one that I might use, that I have operated on a large number of cases in the interval between attacks and that they have all recovered. This could not be fairly used to represent all of the surgical aspect of the question.

I would like to learn what medicinal treatment is in these cases, on what principles it is based, how the medicines act, and what they do. I am a great believer in the production of adhesions, in the sending forward to the front of armies of leucocytes to work their way into the enemies' country, in the protective properties of the omentum, but I am not much of a believer in the action of any medicines yet known on the poisonous toxines produced by peritonitis.

Now for a word regarding the second stage of the disease. The public have begun to call it the "*too late stage*," the stage of *neglect* and *inactivity* on the part of the physician. The question is constantly asked the surgeon, "If my son or daughter had been operated on sooner might not his or her life have been saved?" The surgeon, to protect his professional brother, says nothing to incriminate him but perhaps does not tell the whole truth. We see according to our light. But surely experience is the best teacher.

Every third-year student should be able to diagnose a case of

appendicitis. The literature of the present day is teeming with cases, and members of the medical societies are sick and tired of discussions of the subject. It is too late to call a surgeon to operate on a case after the pulse has become rapid, rupture (the so-called secondary rupture) has taken place and the whole peritoneum has become inflamed. This is not the period for operation, *the golden opportunity has slipped by.* It is owing to the fact that so many operations have been done in this stage that surgical treatment of appendicitis has been somewhat discredited. Such cases do recover with a prolonged convalescence and after hovering on the verge of the grave for days. But no such prolonged convalescence is noticed in cases operated on within twenty-four hours of the onset of the attack. These cases invariably do well if operated on by a skilled surgeon and with proper precautions.

I am willing to grant that in country districts, where the fee of a consultant from town is a considerable item to the people who have to pay it, the physician is to be excused for delay, but, in cities where skilled consultants can be obtained within an hour, where trained nurses can be had within a few minutes, where people are more willing to consent to operative interference, the delays so frequently seen are not to be so readily excused.

All that I have to say now is said after years of mature consideration and ripe experience. It depresses me to receive messages from distant towns by telephone or telegraph to come at once to operate for appendicitis and to arrive and find the patient dying after three, four or five days of illness and delay. This is a more frequent experience than that of arriving in time to operate with any hope of success.

The cases operated on in the intercurrent period between attacks nearly all come to the city for the purpose of operation. Finally, I claim that it is possible, by careful consideration of the symptoms, to make a positive diagnosis of appendicitis in its earliest stage, and that it is much safer to lift the abdominal veil to ascertain the condition present and remove the source of danger. If exploratory operation is ever a justifiable operation, when the symptoms of appendicitis are present it is doubly so.

THE SYMPTOMS AND PATHOLOGY OF SEBORRHŒIC ECZEMA.

By Graham Chambers, M.B. Tor.

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IN the year 1887 Unna introduced the name seborrhœic eczema to the medical profession. He had been studying the relations of a number of diseases, such as pityriasis capitis, the seborrhœa sicca of Hebra, the seborrhœa corporis of Duhring, the lichen annulatus serpiginosus of Erasmus Wilson, as well as of certain forms of rosacea, of eczema, and of psoriasis, and had found that they were very closely allied both as regards their clinical and pathological features. He found that they were all superficial inflammations of the skin, catarrhal in nature, with an exudate which contained as a rule very little serum, but a large amount of fat. He found that the increase of fat was a result of the dermatitis, and was derived from the coil glands and not wholly from the sebaceous glands, as had been generally held. A bacteriological examination of the scales and crusts convinced him that there was invariably present in all these diseases a flasked shaped bacillus and a mulberry coccus. He found that the flask bacillus was the same as that previously isolated by Malassez, and that a pure culture of it was without effect on the skin. However, with a culture of the mulberry coccus he was able to produce an eczematous patch followed by alopecia.

These pathological relations convinced Unna that all these diseases should be classed under one head, to which he gave the name seborrhœic eczema.

As the symptoms of the eruption undergo considerable variation in different regions of the body, I shall first shortly describe the general symptoms and pathology of the disease taken as a whole, and then I shall give a description of the clinical features as they appear in different localities on the body.

General Symptoms.—Seborrhœic eczema is an infectious inflammation of the skin. It may occur on any part of the body, but it

has preferences for certain regions. It invariably commences on the scalp, whence it tends to progress downwards, affecting different localities in the following order of preference: Face and neck, sternal and intrascapular regions, groins, armpits, umbilicus, and lastly the extremities. In a few cases it becomes general, producing a form of pityriasis rubra. The disease is as a rule very sluggish in its course. It may remain confined to the scalp for years before it invades the rest of the body. When the disease spreads, widely separated localities may be attacked. Thus seborrhœic eczema of the scalp and inguinal regions is fairly common.

The lesions generally have a scaly or crusted appearance, although they frequently undergo change, as for example, into the moist form. Moist lesions are probably always secondary, and in most cases are associated with the scaly or crusted manifestations of the disease. In uncomplicated forms of the disease vesicles and pustules are absent.

The scaling lesions are the mildest variety, and are frequently seen on the scalp and face, where they form circumscribed or diffuse scaly patches, on a normal colored or slightly hyperæmic skin. This is the condition which was formerly described as pityriasis capitis, barbæ, faciei, etc. Another form of scaling lesion is seen during the involution of the crusted and papular patches, particularly in the sternal and intrascapular regions. Here the skin has a fawn color which is a specific symptom of this disease.

The crusted form of lesion results from the accumulation of scales, fat and fibrinous serum. The crusts are generally greasy and of a yellowish or brownish color. Typical forms are frequently seen on the scalps of infants and of adults, where they nearly always result in alopecia.

Besides appearing in diffuse patches the lesions frequently present very characteristic forms and figures during the evolution and involution of the disease. Thus we frequently see solid patches varying in size from a pea to a large coin. Many of these lesions clear in the centre and assume an annular form, and these again may become crescentic in shape by the involution of part of their circumferences. When a number of these annular and solid forms coalesce gyrate figures are produced. The epidermis around the periphery of many of these lesions has a wrinkled appearance. The scales and crusts are, as a rule, readily scratched off down to the tips of the papillæ, when the surface of the patch appears dotted with minute blood points. This is the condition which is so frequently observed in psoriasis. An important characteristic feature of the

disease is the fact that subjective symptoms are often absent, and never well marked. The patients are sometimes unaware of the existence of the rash until their attention is directed to it; but itching in moist regions is generally complained of, and occasionally may become severe, particularly when the patient is heated.

Pathology.—A microscopical examination of the skin shows that the disease is always a dermatitis. In a mild case such as the scaly form the inflammatory exudate is principally situated in the papillæ and around the hair follicles; while in the more severe grades it extends to part or whole of the cutis. The epidermis is always thickened and shows deficient cornification. Mitosis of the prickle cells, which is always present, is most marked in the papular and crusted lesions. The cells of the stratum corneum generally have distinct nuclei, and can be seen exfoliating from the surface, showing the epidermic origin of the scales found in this disease. There is no indication present in support of the view which was held by Hebra, Sr., that the squamæ were derived from the sebaceous glands. These latter, are, as a rule, unchanged. The sweat glands, however, frequently suffer from degeneration of the epithelial cells lining part or whole of their coils. The infundibula of the long hairs are always dilated and are completely filled with fat, horny and granular cells in the form of a conical plug which Sabourand has named "Seborrhœal cocoon." On account of their dilated mouths the hair follicles appear more hour-glass in form than normal. The hairs are atrophied and their sheaths frequently have a wrinkled appearance.

A bacteriological examination of the scales, crusts, and follicular plugs shows great numbers of bacteria, and many investigators have attempted to isolate the parasite of seborrhœa and seborrhœic eczema. As far back as 1874 Malassez in Germany, and Chincole in France isolated bacteria in connection with disease, but no inoculation tests were made. Later Unna isolated a mulberry coccus, to which he gave the monococci and with a culture of it produced alopecia in a rabbit. Inoculations on himself and on his assistant produced eczematous patches. Sabouraud in 1897 reported a method by which a pure culture of a micro-bacillus could be prepared from the scales and crusts and "seborrhœal cocoons.' Inoculations with this bacillus produced typical patches of alopecia areata. Unfortunately he did not report whether or not it would produce a dermatitis. If Sabouraud's micro-bacillus should prove to be the parasite of seborrhœic eczema, then alopecia areata will have to be considered an acute form of the disease. Merrill, of Mass-

achusetts, has also made a special study of the flora present in the scales and crusts of this disease. He has isolated ten distinct forms, two bacilli, two micrococci, and six diplococci. The micrococci were staphylococcus albus and aureus. They were invariably present on New York city patients but generally absent in country patients. Merrill found that two forms of diplococci were quite constantly present and that cultures of them had respectively a white and a yellow color. He inoculated patients with these forms and found that in the majority of cases typical eczematous patches resulted. From these lesions the same diplococci were obtained.

Regional Forms of Seborrhœic Eczema.

SCALP

The clinical features of the disease in this locality are somewhat different from those on other parts of the body. This is no doubt due to the presence of long hairs and other anatomical differences. In describing the symptoms I shall follow the classification of Unna, who divides the disease in this region into three forms:

(*a*) Pityriasis capitis.

(*b*) Eczema sehorrhœicum crustosum capitis.

(*c*) Eczema seborrhœicum madidans capitis.

These forms may occur independently, but frequently they are associated, or shade off into each other. All the forms may be followed by alopecia.

PITYRIASIS CAPITIS.

(*a*) This is a very common form of the disease, and is familiarly known as dandruff. The vertex is most frequently attacked, but it may extend to the whole of the scalp. The lesions are, as a rule, diffuse, and are covered with white or greyish furfuraceous scales. These squamæ occasionally accumulate to form patches of considerable thickness. The affected skin is generally pale and dry, but hyperæmia may occur. The hair becomes dry, brittle, lustreless, and atrophied, and in most cases gradually falls out. Pincus gave the name alopecia pityrodes to this form of baldness. Pityriasis capitis frequently extends on to the neck and forehead. In the latter position it forms a scaly or crusted band—seborrhœic corona—along the border of the hairy scalp.

ECZEMA SEBORRHŒICUM CRUSTOSUM CAPITIS.

(*b*) The clinical features of this form vary with the age of the patient. During the first year of life it is represented by the greasy, yellowish scales and crusts which are chiefly situated at the vertex, but

may be found on any part of the scalp. When the crusts are removed the scalp sometimes appears normal, while at others it is red, inflamed, and moist. With older children a similar condition may be obtained, but a weeping eczema is more frequent. At puberty and onwards the crusted form is very common, and frequently cases are observed where the whole scalp is covered with yellow or brownish-black, wax-like scales and crusts. Occasionally annular and circinate lesions occur similar to those found on the trunk. These look somewhat like ringworm, but short, broken-off hairs are never found. If allowed to take its course this form of seborrhœic eczema invariably is followed by alopecia.

ECZEMA SEBORRHŒICUM MADIDANS CAPITIS.

(*c*) Moist seborrhœic eczema of the scalp occurs principally in children. It is always secondary to the scaly or crusted forms. When all the lesions become moist in appearance the eruption very closely resembles weeping irritation eczema. The latter, however, is symmetrical, whereas there is no tendency to symmetry in the former. Again, in the seborrhœic process there is generally part of the eruption which has retained the scaly or crusted appearance. Weeping seborrhœic eczema of the scalp in children is generally associated with a similar condition on the face, ears, and forehead. Pustules and boils frequently result from the infection of the lesions by pus germs.

FACE AND NECK.

When the eruption extends to the face it selects as its favorite site the central portion—interpalpebral space, nose, chin and adjacent parts of the cheeks. This is probably due to the habitual loss of tone in the vessels of these regions. The clinical manifestations of the disease in these localities may be the same as in other parts of the body, but they frequently present a special type characterized by redness with slight scaling. Unna gives the name seborrhœic rosacea to this process and claims that nineteen out of every twenty cases of rosacea are of seborrhœic origin. This telangiectasis probably results from the chronic dermatitis in a region where the vessels are predisposed to paralysis. The bearded portion of the face and neck of man are frequently the seat of the disease. Here the clinical features are as a rule the same as on the scalp, and lesions present a scaly, crusted, or moist appearance. The disease in this locality is frequently complicated by other skin affections as for example sycosis. The seborrhœic eczema is the primary and the pus infection of the follicles the secondary affection, and therefore this form of the eruption should be called sycosiform

seborrhœic eczema. These cases were formerly classed under sycosis, and were found very intractable to treat, and when apparently cured had a great tendency to relapse. The explanation of this characteristic is probably that, although the pustules had disappeared, the seborrhœic eczema was still present and formed a good nidus for re-infection by pus germs.

The eyelids are also frequently attacked by the disease. Their external surfaces may present a red and scaly appearance, but it is generally at their borders amongst the eye-lashes that the disease is most frequently found, forming many cases of blepharitis.

The disease is also frequently seated behind the ears, where it forms red crusted or moist patches. These lesions somewhat resemble those of irritation eczema, but the former are more sharply defined and give no history of vesication. The ears are also affected by the process. Scaly patches are frequently seen in front of the conchæ and in the auditory canals.

TRUNK.

The disease in this locality is fairly common and is generally limited to the sternal and intrascapular regions. The clinical features have been known for at least the last fifty years. Its process corresponds to the lichen circumscriptus (Willan and Bateman). lichen annulatus serpiginosus (Erasmus Wilson), seborrhœa corporis (Duhring), seborrhœa papulosa (Crocker), etc. The eruption begins with red, scaly papules. These enlarge to the size of small coins when frequently their centres undergo partial involution, becoming scaly and fawn colored, which is very characteristic of this disease, These lesions increase by peripheral extension, and are bounded by slightly elevated salmon-colored papules. When several of these lesions coalesce a gyrate formed figure results. This is the origin of the flower-leaf form which is sometimes seen in these regions. Frequently part of the circumference undergoes involution and a crescentic shaped figure is produced. The solid lesions generally have a red, scaly appearance, although at times they become somewhat papular in character. The eruption is very chronic in its course. Slight itching, particularly when the patient is heated and perspiring, is the only subjective symptom complained of. When the disease attacks the umbilicus the lesions are apt to become inflamed and approach in appearance non-seborrhœic eczema. The scales and crusts are greasy in character. Until quite recently it was held that many cases of eczema of the umbilicus were due to the irritation of rancid fat, a product of an antecedent seborrhœa.

Now the order has changed, and the seborrhœic parasite is believed to be the cause, and the secretion of fat the result of the inflammation.

GROINS AND ARMPITS.

The lesions in these localities are as a rule sharply defined and irregular in outline. The centrally healing, centrifugally extending type is the most common form. However, solid particles with polycyclic borders are frequently observed. In the inguinal regions the writer has seen several cases where the lesions had an irregular convex papular border extending on to the thigh and lower part of the abdomen, and bounding a highly glazed red surface. This centrally situated part of the lesion has sometimes the typical fawn color. These cases were formerly classed with the so-called eczema marginatum. The disease was formerly frequently diagnosed as intertrigo. The lesions of the latter are poorly defined, are not bounded by irregular lines, and do not extend beyond those parts where the natural folds come in contact with one another. Owing to the excessive moisture present and the constant irritation of the folds of the skin in these regions the parts frequently become inflamed and weeping, and then scaling and crusting are not observed. However, as soon as the lesion extends beyond the region of excessive moisture, then it becomes dry and covered with scales and crusts.

The symptoms of the disease in the axillæ are very similar to those in the groins. The lesions occur in various forms—nummular, annular, circinate, gyrate, etc. Itching is frequently a marked symptom in both localities.

EXTREMITIES.

When the disease attacks these regions the lesions are, as a rule, not so characteristic and well defined as those on other parts of the body, and consequently the eruption becomes difficult to diagnose, unless well-marked objective symptoms occur on other localities. The solid, scaly and crusted lesions are the most commmon forms, while the annular and crescentic types are rarely observed. The solid lesions may unite and form a continuous surface of consider able size; but there is invariably some small solid lesions separated from the main patch. The writer has observed several such cases over the shins and around the ankles of patients. The palms and soles were also attacked by the disease. In these regions slightly scaling patches were generally observed.

COLLES' FRACTURE.*

By R. Ferguson, M.A., M.D.,

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COLLES' fracture is said to be the most frequent of all fractures except that of the clavicle. The general practitioner, as well as the specialist in surgery, often has occasion or opportunity to treat this fracture. It is, however, one of the most difficult to reduce satisfactorily, and in probably no other do deformity and impaired function so frequently result, either from improper treatment or unavoidable causes. It is a prolific source of malpractice suits, and the bane alike of the experienced surgeon and the bungling tyro.

Colles' fracture, so-called from the eminent Dublin surgeon, who, in 1814, first described the nature of the injury, is a fracture of the lower end of the radius, about an inch above the articulation, at the junction of the compact with the cancellated bony tissue. It extends higher upon the posterior than the anterior surface, as it is usually oblique from before backwards. The external lateral ligament is almost invariably ruptured, and the radio-ulnar ligaments are also frequently ruptured. The styloid process of the ulna is often fractured.

This injury is nearly always caused by a fall on the palm of the outstretched hand, the whole weight of the body being transmitted through the radial side of the hand to the lower end of the radius. The lower end of the ulna being excluded from the wrist-joint by the interposition of the inter-articular fibro-cartilage, does not suffer from the impact of the fall, with the exception of the internal lateral ligament, which is usually torn.

The deformity and its causes. This fracture has been called the "silver-fork fracture," but the resemblance holds only when a side-view of the fracture is taken, and does not apply to the dorsal view, in which the most striking deformity of the fracture, viz., the dis-

*Read before the London Medical Association, March 14th, 1898.

placement of the hand to the radial side, is outlined. The well-marked dorsal prominence is caused by the displacement of the lower fragment upwards and backwards by the action of the radial extensors of the carpus, the extensors of the thumb and the supinator longus. The prominence on the anterior aspect, caused by the projection forward of the lower end of the upper fragment, is held to be due to the action of the pronator quadratus and the pronator radii teres. The hand is displaced to the radial side, so that its axis is oblique to that of the forearm, and the head of the ulna is unduly prominent. The displacement of the hand is accounted for by the direction of the fracturing force ; the ulnar border coming first into contact with the ground, the force is directed towards the radial side as well as upwards and backwards. This same force almost invariably tears the internal lateral ligament from its attachment to the styloid process of the ulna, or fractures that process itself. The prominence of the head of the ulna is not due to displacement of that bone, but to the hand being shifted to the radial side and away from the ulna.

Treatment. A great many forms of splints and appliances have been devised for the treatment of this fracture, but a complete reduction of the displacement is of more importance than the form of the appliance used. Bad results are usually due to incomplete reduction rather than to unsuitable splint appliances.

The fracture, if reduced, has no tendency to separate. Strong dorsal flexion, forcible extension, counter-extension, and manipulation are required to disentangle the fragments and remove the dorsal prominence. This is best done under an anæsthetic, and untoward results would be less frequent if the rule of reduction under an anæsthesia were more generally followed. If properly reduced, a straight line through the middle of the index finger will touch the outer edge of the styloid process of the radius. Impaction of the upper fragment into the lower occurs frequently in this injury. The compact tissue of the posterior aspect of the upper fragment is impacted with the cancellous tissue of the palmar aspect of the lower fragment. In feeble, aged patients reduction of the impaction is not advisable. It is better to have a deformed wrist than failure of bony union, and impaction favors the consolidation of bony union. At all events, the patient should be consulted as to the choice between permanent deformity and an attempt to reduce the deformity with the risk of non-union. In the majority of fractures, rest and fixation of the parts are the great desiderata, but not so in this fracture. Here we have to treat not simply a broken bone but a severe sprain and injury of the wrist joint as well. The treatment must be largely the

treatment of sprained and ruptured ligaments, and the replacement of bones displaced by the loss of ligamentous support. The most striking deformity of the fracture, viz., the displacement of the hand to the radial side, is due to rupture of the ligament connecting the styloid process of the ulna with the side of the carpus. Dr. Carson, of Savannah, Ga., has proved with the aid of the x-rays that we may have the characteristic deformities of Colles' fracture from rupture of this ligament alone, or fracture of the styloid process, even though the radius may be wholly intact. Further the anterior and posterior ligaments and the radio-ulnar ligaments are certain to be injured. There is also displacement of the inter-articular fibro-cartilage. More or less inflammatory action must be excited in the tendons of the hand passing through the anterior and posterior ligament. These considerations, together with the proximity of the fracture to the wrist-joint, indicate that the treatment of the sprain is of primary importance. Complete bony union is assured in three to four weeks, while ligamentous union requires a much longer time.

Whatever form of splint is used it should not extend beyond the metacarpo-phalangeal articulation. A long anterior splint conforming to the mould of the palm, and a short posterior splint reaching only to the wrist joint, are usually employed. Free movement of the fingers from the outset, to prevent fixation of the tendons, is an important precaution. Antero-posterior splints extending only to the wrist answer quite well, and are a safeguard against ankylosis of the joints. Extra padding may be used over the dorsal and anterior prominences of the radius, and over the anterior prominence of the ulna.

Dr. Pilcher, of New York, and Dr. Moore, of Rochester, were among the first to advocate dispensing with splints in this fracture, and merely enveloping the wrist with a snug strip of strong adhesive plaster. Such an appliance may be sufficient in simple cases, but where extensive laceration of ligaments has taken place it seems safer to rely upon a more rigid support.

After the first week passive, and later active, movement of the wrist should be practised. In four to six weeks the splints may be dispensed with. Before and for some time after removal of the splints, friction and massage should be employed to correct rigidity of the joint. Under twenty years of age we have to deal with separation of the epiphysis, and not with an ordinary fracture. The forearm is put up in a sling midway between pronation and supination. The hand, however, is not supported in the sling in order that the tendency to displacement towards the radial side may be overcome by its own weight.

OPIUM IN HEART DISEASE.

By Alexander McPhedran, M.B.,
Professor of Medicine, etc., in the University of Toronto.

WITH few exceptions the symptoms of heart disease arise from deficient power in the heart to meet the demands made upon it. This is true whether the excess of work thrown upon the heart be due to disturbance of the circulation by disease of the valves, or to degeneration of the wall of the heart, reducing its power below the requirements of the circulation. Our conceptions of heart disease are so intimately associated with disease of the valves that too often the two conditions are looked upon as identical, or, rather, that the changes in the heart wall are secondary to the disease of the valves.

The valves are but mechanical structures, and disease of them, apart from infective processes, gives rise to symptoms only as it deranges their mechanical action, and thus leads to disturbance of the functions of the heart, and through this to degeneration of the cardiac walls. Cases resulting from lesions of the valves form only a small proportion of all the cases of heart-failure.

Pathological changes in the heart occur much more frequently as part of disease of the general vascular system. It is in such cases that the most mature judgment is required in estimating the amount of injury to the cardiac muscle and its powers of recuperation, as well as the best means to be adopted to restore its powers so that they may be adequate to the demands made upon them.

In the treatment of cardiac failure our aim should be twofold, viz., first to reduce the work of the heart as much as possible, and, secondly, to stimulate and strengthen its walls so as to enable them to perform their work adequately.

Of the means at our disposal to reduce the demand made on the heart, the most important is, of course, rest. By rest we seek to relieve the heart of all work except that necessary purely for the maintenance of life. Many patients are restored again and again

from incompetency of the heart by rest in bed alone. Each recurring attack of failure is more easily induced than its predecessor, and the restoration of competence is effected with more difficulty, until rest alone is unequal to the task of restoring effective power to the heart.

As the effect of physical labor is to greatly increase the strain on the heart, it follows that the benefit of rest in restoring the fail ing heart will be much greater in the man engaged in physical labor than the man leading an easy life. In the laborer the heart obtains relief to a much greater degree by rest than does the heart of his more fortunate neighbor. In the former, rest may mean the removal of three-fourths or more of the heart's ordinary labor, while in the latter, not more than one-fourth or even less of its work is relieved. Another fact of great importance in the difference between the two is that in the laboring man the diseased heart fails early, while in the man of easy life it is not until the heart is far advanced in degeneration that he shows the signs of failure. The former will therefore possess much greater recuperative power than the latter.

When the cardiac changes have advanced so far that rest alone is insufficient to restore competency to the heart's action, the end, for a time, may be attained by the use of cardiac tonics and stimulants to aid the rest in restoring the equilibrium.

In addition to rest the labor of the heart is also greatly relieved by full elimination of the waste products in the blood through the kidneys and bowels. It is probable that this in a great measure affords the explanation of the great benefit often reported from the use of calomel in cardiac disease with dropsy. Any purgative that causes free liquid evacuations will do good.

If the circulation is in fair condition, the drinking of water on an empty stomach is probably the best diuretic, and therefore the most efficient stimulant to elimination by the kidneys. Any remedy that increases the force of the circulation will, of course, proportionately increase the excretion by the kidneys.

In advanced cardiac disease, especially after repeated failures, complete rest of body and mind, aided by free administration of cardiac stimulants and tonics and the judicious use of purgatives, often fails to give relief. The signs of cardiac incompetency increase; there is increasing dropsy and dyspnœa with insomnia. The rest of the body is not sufficient to bring the needed rest to the heart; it remains irritable; its action becomes increasingly irregular. The patient grows weaker, the paroxysmal dyspnœa increases.

Almost as soon as he falls asleep a severe attack of dyspnœa causes him to awake and sit up in bed. The distress from the dyspnœa is great, but that from want of sleep is greater These are cases in reality of *angina sine dolore.* Such a condition is rarely benefited by the freest possible use of digitalis or other cardiac tonics and general stimulants. If the dyspnœa is not due in part to effusion into the pleura and œdema of the lungs, a dyspnœa that is persistent and not paroxysmal as cardiac dyspnœa is, there is no remedy so effective in such a condition as morphine. The comfort afforded by a hypodermic injection is almost incredible. Given by the stomach it often fails even in much larger doses, because absorption is so slow on account of the venous stasis in the mucous membranes of the stomach as well as of other parts, caused by the impeded circulation. In most of the writings on the treatment of cardiac failure too little is made of the great benefit to be obtained by the use of morphine in such conditions. Many of them make no reference to morphine at all in connection with heart disease; a few place its efficiency in severe heart disease next to digitalis. I am inclined to look upon it as even more important than digitalis in these cases, in fact, as indispensable. The following cases show well its great usefulness.

Case 1. O'Neill, aged 70, rather a small man of spare habit. Had been a business man, and not been subject to much hardship or dissipation. He was admitted to the Toronto General Hospital suffering from the effects of acute heart failure. This was his third attack. He presented all the usual symptoms, viz., attacks of extreme paroxysmal dyspnœa and well-marked Cheyne-Stokes respiration; insomnia, starting up with an attack of dyspnœa as soon as he fell asleep; extremely irregular, tumultuous action of the heart, many of the contractions giving no pulse at the wrist; considerable dropsy of abdomen and legs; a large liver; loss of appetite, with considerable flatulence. He was unable to lie down; he was propped up in bed with a back-rest. The bowels were acted on freely with calomel, followed by salines. Digitalis, with general stimulants, were given freely. His diet was light and nutritious. Ten days later, there being no improvement, morphine, one-fourth grain, was given subcutaneously at bedtime. It was followed by a good night's rest, with corresponding improvement in the general symptoms next day. The morphine was repeated every night for a week, by which time the heart's action was regular, the area of pericardial impact and dullness materially reduced, the dropsy had almost wholly disappeared, the appetite had become much bet-

ter, and his general condition correspondingly improved. Two weeks later he left the hospital in good condition. Of course, the heart was still large, and it was only a matter of time, he was told, until the symptoms would return. He was enjoined to take active exercise within the limits of perfectly easy breathing, and to avoid over-strain, exposure, over-eating, and dissipation of all kinds. Six months later he returned with a relapse, but it was much less severe than the former attack, and he recovered from it after a short stay. He has not been heard from since.

Case 2. A Russian Jew boy, aged twelve, entered the Victoria Hospital for Sick Children, March 31, 1896. He had always been a weakly child. Had a mild attack of rheumatism when nine years old. Two weeks before entrance into the hospital he had a sudden attack of hemiplegia of the right side. He had recovered the use of the leg fairly well on admission, but the arm was helpless. He complained on entrance of severe pain in region of spleen, for which he received morphine, one-tenth grain, three times. His heart was enormously enlarged and showed all the signs of acute failure of compensation. There appeared to be disease of both mitral and aortic valves. The ends of the fingers were clubbed to an extreme degree. A week after admission his temperature, which had reached as high as 104° F., became normal, but the circulation did not improve. The dyspnœa was very distressing, so that his nights were very restless. For this, morphine, one-eighth grain was given subcutaneously every night with the most satisfactory results, but it had to be continued for a month. His condition improved and he was able to sit up. His temperature would frequently rise a few degrees without any apparent local cause. He did not regain strength enough to go about, but his circulation improved so much that he rested with comfort, and his appetite was good. He became suddenly prostrate on June 1, and died in a few hours.

Case 3. Wm. E., aged sixty-six. A civil servant suffering from great dilatation, with extreme dyspnœa, insomnia, and dropsy. He had been treated before I saw him with strophanthus, digitalis, caffeine, etc., but without improvement. Morphine, one-fourth grain, at bedtime gave a good night's rest; it relieved breathing and steadied the heart. Magnesium sulphate was given every morning to produce a free liquid evacuation. After three days the morphine was stopped and codeine and caffeine, each two grains, and calomel, one grain, given instead, with chloralamide, twenty grains, at bedtime. Digitalis was also given. This gave good rest

at night and made him sleep almost all day, so that the chloralamide was omitted and codeine reduced to one grain. In a few days he became nauseated, and both digitalis and codeine were stopped. His progress was satisfactory, and a general tonic was ordered. To maintain a stimulus to the circulation dessiccated suprarenal capsule, two grains, three times a day, was given. His restoration was very satisfactory under the circumstances. He resumed work in October, and remained well until November, when failure of compensation again occurred and increased gradually. It required morphine, one-half grain, to secure rest and sleep. Not improving well, saline baths were resorted to, but with only moderate benefit. He improved slowly and was able to go out somewhat afterwards. He died suddenly a few months later.

These cases illustrate the benefit to be obtained from the use of morphine when the failure of the heart appears to be largely due to exhaustion of the nerve centres, as shown by the irritable action of the heart and the paroxysmal respiratory distress. The morphine quiets the irritable heart and enables the patient to obtain sleep during which excretion is increased and the circulation and nutrition improved. In proportion as the dyspnœa and distress are due to serious effusion into the pleural cavities, the pericardium, the lungs, etc., morphine becomes less efficient in giving relief. In these cases the symptoms are due largely, if not wholly, to mechanical causes resulting from the presence of the serous exudate, and can only be relieved by removing these causes. In these the symptoms are constant in so far as they depend on the exudate.

A CASE SHOWING IN A PECULIARLY MARKED MANNER ONE OF THE EFFECTS OF EYE-STRAIN.*

By G. Herbert Burnham, M.D., F.R.C.S. Edinburgh, M.R.C.S. England.

Associate Professor of Ophthalmology and Otology, Toronto University, and Oculist and Aurist to the Toronto General Hospital and Mercer Eye and Ear Infirmary.

George R. S——, aged 58 years, was sent to me September, 1894, by Dr. Millward, Grimsby. The patient gave me the following history:

Twenty-eight years ago there began a severe pain in his left eye, temple and side and back of head, which lasted more than one year. At times the pain was so agonizing that frequently during this period hypodermic injections had to be given.

At the end of this time the pain gradually lessened in violence and a few months later was gone. The sight of the eye then became very poor, that is perception of large objects merely. His head and eyes, he says, gave him no trouble till four weeks prior to consulting me, when a pain began in his right eye, temple and side and back of head. It quickly assumed the same degree of severity; in fact it exactly resembled the pain which he had in his left eye twenty-eight years before. During these four weeks he was frequently given hypodermic injections of morphia on account of the agonizing pain. On examination I found the left eye with a normal fundus and a good deal of hyperopic astigmatism; the right was also normal, but showed a small amount of hyperopic astigmatism. I ordered glasses as follows: Distance, R. + 0.50 sp. ⌒ + 0.50 cyl. ax. 180, L. + 3. cyl. ax. 180°. Reading, + 2.50 sp. was added to each eye. I ordered him cemented bifocals to be constantly worn and gave him no medicine.

In two months afterwards he reported to me, saying that since the use of the glasses the pain had disappeared and he had felt no return whatever. This was, of course, a very gratifying result. He felt that the change in his left eye was almost miraculous, because

* Read before the Toronto Medical Society, February 18th, 1897.

useful vision had been restored to an eye that he believed to have been blind for twenty-eight years. The conclusion seems naturally to be that the agonizing pain in the left eye twenty-eight years ago was due to the great efforts the eye had made to overcome the error of refraction and secure binocular vision. With the cessation of these efforts, that is with the almost total suppression of the image of the left eye, the pain vanished. No return was *felt* till the error of refraction of the right eye, combined with the presbyopia, caused undue efforts to be made. That as fierce nerve-centre explosions had been caused years ago from overstrain, these centres were much more easily aroused, than they otherwise would have been, to a display of excessive activity. That the trouble with the right eye did not occur earlier was because the glasses he was wearing, when he consulted me, had sufficiently aided the right eye to cause a delay but not to prevent a nerve-storm. The correction of the left gave excellent vision $\frac{20}{30}+$. One question that might be asked is, why did not the pain begin before he was thirty years of age, as the error of refraction was always present? To that I cannot give any more accurate answer than that it is sometimes impossible to say when a person having an error of refraction will begin to suffer from the consequences of eye-strain. Often the effect of the eye-strain shows itself very early and again not till very much later. The reason of this is very difficult to give, but often the surroundings, occupation and certain peculiarities of the nervous system seem to be potent factors.

This case also shows the great necessity in all affections in any way connected with the head of remembering the peculiar and apparently out-of-the way effects caused by eye-strain. In all central disturbances showing the alarming symptoms presented by the case under consideration, a most careful and exhaustive examination should be made. It is not at all derogatory to the general practitioner to say that it is impossible for such an examination to be made by him. Neurologists now seem to take a much more favorable view of many nervous affections than they once did; for they have realized that the so-called incurable structural lesions are not as great a factor in every case as they once thought. In May, 1896, I received a letter from the patient herein mentioned, who said that ever since he began to wear the glasses I ordered him in September, 1894, the pain had completely disappeared.

I have narrated this case to impress upon the members of the medical profession the peculiar nature and very great severity of some of the nerve-centre explosions due to over-strain of the eye.

Selected Articles.

THE PRESERVATION OF THE HYMEN.

By Howard A. Kelly, M.D.
Baltimore.

IN Celsus' "De Medicina," written about the time of Christ, in the chapter on calculi, after declaring that small calculi may escape spontaneously through the shorter and more relaxed urethra, he says that in most cases it will be necessary to apply the same methods of hooking the calculus down and holding it against the neck of the bladder while incising, as in men, but he adds the caution that in the virgin the finger must be introduced per anum, as in the male, while in married women it may be introduced into the vagina.

Severin Pineau, in his work written at the end of the sixteenth century on the signs of virginity, quotes the ancients as his authority for the dictum, "it is criminal to rupture the hymen" ("magnum est crimen perrumpere virginis hymen").

And such has been the attitude of the profession through all the centuries of the past; honorable men have ever carefully guarded as sacred the rights and the interests of the young women who have trusted their persons to their professional care, and the barrier which Nature has erected at the vaginal introitus as the sole *prima facie* evidence of virginity has been preserved intact.

I wish now to urge, in the first place, that it has remained for our day and generation, at a time when the study of the diseases of women has become a fashion, for practitioners of medicine to ruthlessly disregard all moral considerations and make digital examinations of young women with pelvic pains at the menstrual period, or those presenting any abnormality in the menstrual flow or complaining of a leucorrhœa.

I know not how else to characterize this *cacoethes examinandi*, this reckless habit of investigating the sexual organs of young women, than as a species of rape.

I know, for example, of a large institution in our city entrusted with the education of young women from all parts of the country. In numerous instances young girls with purely functional dysmenorrhœa are taken to a physician, who examines them, inserts specula, and institutes treatments where, as I have had occasion to verify, there is actually no discoverable local disorder whatever.

Other young women are constantly coming to me from a distance with the statement that they have "ovarian disease" or "tubal disease" or "anteflexion of the womb," who are perfectly sound and who ought never to have been examined at all; and I have thus to record in my case-book in numerous instances "no pelvic disease" or "metrophobia"—a word I have coined to designate those who are fully assured they have some grave "womb trouble," but are, notwithstanding, perfectly sound.

Aside from all the hospital cases I have seen, I find in my private case-book the records of twenty-eight cases with no pelvic disease out of a total of 550 in all, about 5 per cent.

While male physicians are great offenders in this respect, many of the women who practice medicine are far worse; indeed, they often seem to possess no conscience whatever in dealing with these sacred interests of their own sex.

A young woman with a natural sense of shame, but utterly guileless of any knowledge of anatomy, feels that it is easier for her to speak of her pelvic discomforts to one of her own sex; but the woman doctor (with many noble and conspicuous exceptions, I am happy to say) then feels, on her part, that it is necessary, in order to make a complete investigation of every case, to inspect the genitals and to insert her finger into the vagina; she generally ends by putting in a speculum, too, and tampons, and so begins a never-ending course of so-called "treatments," during which the natural ups and downs of health encourage the trusting victim to think at first that the "treatments" are benefiting her, and then, when the pains recur, that there surely is something at fault, and so it continues for years. Sooner or later, in many cases, an infection is introduced, and from having no disease at all she is inoculated with a salpingitis, and she is fortunate, finally, if she escapes a radical operation removing her uterine tubes and her ovaries. The records of this country within the past twenty years could show, I verily believe, thousands of such victims, at first unnecessarily insulted, and then robbed of their distinctive organs of sex for imaginary ailments or diseases acquired.

Such is the character of this evil; of its extent no one can do

more than roughly estimate. My own experience leads me to conclude that these vicious practices are both general throughout our country, and that they affect our young womanhood to the extent of inflicting an unnecessary injury upon many thousands yearly.

In case an examination is actually necessary, it must be made by one who is thoroughly competent to decide at once whether or not there is any disease present, and who will be able to proceed at once to do all that may be required to relieve it. By dilating a cervix, or rupturing a large Graafian-follicle cyst, or breaking up adhesions, oftentimes all can be done at once which it is possible to do at all, and the patient will be spared the distress of useless and endless so-called "treatments," which consist in the application of drugs to the vaginal walls or to the cervix, anatomical structures distant from and quite distinct from the supposedly affected organs.

I would urge that there are satisfactory methods of examining young women which need shock no sensibilities and which inflict no injury upon any organ.

In the first place, if the patient has not been examined and treated before and an examination is necessary, it is my invariable practice to propose to do this *under complete anæsthesia*, in this way securing a perfect relaxation, with every facility for making the minutest investigation which it is possible to make, short of actual inspection through an abdominal incision. The anæsthetic obviates the inevitable resistance of the abdominal walls, and the examination leaves behind it no disagreeable memories.

In the second place, when the patient is anæsthetized *the examination must be conducted through the rectum.* The cervix can be easily palpated through the recto-vaginal walls; and as for the body of the uterus, the ovaries, and the tubes, they cannot be clearly palpated in any other way. The rectal examination is therefore not only to be recommended because it spares the hymen, but because *it is actually indispensable to a thorough investigation.*

I have shown on another occasion that the most minute examination may be made by the rectum if the pelvic organs are first skeletonized by putting the patient in the knee-breast position to let in the air and so getting rid of the intestines. After doing this the examination is conducted in the dorsal position. If the finger is not more than 6.5 centimetres in circumference, it may often be inserted into the vagina, slowly and with extreme care, without rupturing the hymen; this is, however, not a good rule, for the tactile sense of many men seems to be so blunt that there is no appreciation of resistance when delicate structures are being investigated, and harm is done unawares.

In the third place, if it is necessary to dilate and to curette the uterus, this may be done by introducing a finger into the rectum and locating the cervix, and then introducing a pair of tenaculum forceps into the vagina and carefully opening them, and catching the cervix and drawing it down to the outlet, where it may then be dilated and curetted, in many cases, without injuring the hymen.—*Abstract, Amer. Jour. of Obstetrics.*

THE DISINFECTION OF THE EXCRETA.

By Chas. A. Hill, B.A., M.B., B.C.Cantab.,
and
John Hill Abram, M.D., London, M.R.C.P.,
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THE methods used for ascertaining the value of any disinfectant are mainly two—namely, the addition of definite quantities of the substance to an active broth culture, with subsequent inoculation upon various media after the lapse of varying intervals, and the action of solutions of known strength upon test organisms inoculated upon threads.

We have limited our enquiry to the disinfection of the fæces, as naturally they are the most resistant. In our earlier experiments the disinfectant solution was added in excess to the solid fæcal mass, but we speedily found that in not a single instance did we get any sterilization of the central portions. Therefore we would insist upon the necessity for thoroughly mixing up the fæcal matter with the disinfectant selected.

We have chosen half an hour as the time during which the mixture must be allowed to stand, as being a convenient one in practice, though we admit that it is a severe test, and no doubt explains some of our results.

The accompanying table gives our results at a glance:

Disinfectant.	Strength.	Action on Fæces.	
		When Mixed.	When Unmixed.
Perchloride of mercury...	1 in 1,000	Spore-bearing forms	Copious growth.
Formol.....	1 in 20	Sterile	Copious.
Carbolic acid.....	1 in 20	Sterile	Copious.
Iodic hydrarg.....	1 in 4,000	Spore-bearing forms	Copious.
Chloros.....	Undiluted	Limited	Limited.
Chinosol.....	1 in 600	Sterile	Copious.
Izal.....	1 in 200	Spore-bearing forms	—
Creolin..... ..	1 in 10	Sterile	—
Carbolic acid (crude).....	Undiluted	Sterile	—
Zinc chloride	1 in 10	Copious growth	—
Copper sulphate.....	1 in 20	Copious	—
Boiling water	—	Copious	—
Sodium chloride.....	1 in 10	Copious	—
Chloride of lime, 15% Cl..	1 in 10	Copious	—
" " 35% Cl..	1 in 10	Considerable	—

It will be seen from the table that we have found corrosive sublimate and crude carbolic good disinfectants. The mineral acids we have not tested, as there are many and obvious objections to their use. Chlorinated lime we find with our time limit of half an hour to be useless. It may be said the preparations were old, but we submit that such an objection necessarily puts the substance out of court. Any of the six disinfectants on our select list may be regarded as absolutely certain in their results when thoroughly mixed with the stool and allowed to stand for half an hour. There are, however, objections to the use of some of them.

Corrosive sublimate is a scheduled poison, acts upon the metal work of the drainage system, and moreover gives a red coloration with stercobilin. This latter point is of importance, inasmuch as it may mask the presence of blood in a typhoid stool; again, albumen is coagulated by mercuric chloride, and thereby protects organisms enclosed in the centre of the coagulum. Crude carbolic acid is cheap and efficient, but does not mix over-well with the fæces; it stains linen, and is poisonous. Formol and creolin are good, but are rather costly. The remaining substance, chinosol, is, in our opinion, the best. It is reliable, an excellent deodorant, and mixes well with the fæces. It is dearer than crude carbolic, but its cost is more than counterbalanced by its portability. It is put on the market in tablet form. The tablets are readily soluble, and may be obtained in such strength that one of them in a pint of water makes a solution of effective strength.

We may sum up our paper with the following conclusions:

1. It is absolutely necessary to mix the fæces thoroughly with the disinfectant.

2. The mixture should stand at least half an hour.

3. Carbolic acid, crude carbolic acid, formol, creolin, chinosol, and corrosive sublimate in the strengths given in the short list are all effective, but chinosol seems the most convenient.—*Abstract British Medical Journal, April 16th, 1898.*

THE FARADIC CURRENT IN THE TREATMENT OF EPILEPSY.

By Prof. Sgobbo.

AMONG the many remedies employed in epilepsy electricity is one which has been followed by results almost always uncertain and usually without benefit. Vigouroux is of the opinion that those who say they have obtained improvement by the electrical treatment of epilepsy have cured cases of hysteria, and Bardet states that all remedies have been used in this terrible disease, and, unfortunately, it cannot be said that electricity has rendered any confirmed benefits.

As early as 1753 Lindhult tried electricity in epilepsy, and in 1785 Ledru founded, at Paris, an institution for the electrical treatment of this disease and there obtained good results. Harris, in 1834, used galvanic electricity in eight epileptics, of whom five were completely cured in less than a month, according to the author. In 1842 Person treated an epileptic girl of twelve years by galvanic acupuncture, applying a needle to the epigastrium and another over the first cervical vertebra. Bougard, in 1859, treated by electricity sixteen cases, of which four were cured. Althaus preferred the galvanic current, and had some cures. He applied the poles over the mastoid processes, over the sympathetic nerve, and in the course of the nerves where the aura was developed. Brunelli had a very good result in a boy of eleven years, from faradization, placing at the beginning of the setting one electrode at the nape of the neck, and the other alternately over the epigastrium and in one of the hands; and at the end of the sitting, for a few minutes, both metallic electrodes in the hands. Neumann, arguing from the view that epilepsy is an affection of the cortical substance of the brain, advises (1) firmly, from one half to one minute, with a current at first weak, the metal anode in the upper region of the forehead and temple on one side and the cathode on the opposite side of the nape of the neck, and similarly with the other side; (2) galvanization of the sympathetic in the neck; (3) the electro-static bath in the form

of shower bath, avoiding the action of the sparks on the vertex. Erb believes that every effort in the treatment by electricity must be directed chiefly towards removing the epileptic modification from the brain. Stein and Benedict have used the electro-static shower bath with benefit.

Here, I think, we can safely assert that the electrical treatment can give good results in epilepsy. The cases of cure reported by the first authors lead me to admit, with Vigouroux, that hysteria was treated. Erb expresses himself thus as to the results of electricity:

"I, myself, have lately tried electricity in some cases, using at the same time other methods of treatment, and have had such good results that I feel encouraged to make further trials; two serious cases, especially, by means of the combination of electricity and bromide of potassium, and later, cold water, improved so surprisingly that I am led to see in electricity an excellent aid to the bromide treatment, which is doubtless the sovereign remedy."

In the Hospital for Nervous Diseases and for Electrotherapy, under my direction, in 1894, I began a series of experiments in the treatment of epilepsy. Out of 1,000 patients only thirty-seven suffered from epilepsy and epileptic convulsions. Of these thirty-seven only twenty-two were treated electrically; the other fifteen receiving bromide of potassium for the sake of comparison.

The different methods of electrical treatment used in epilepsy are: general faradization, galvanization of the head, of the sympathetic in the neck, the electro-static shower bath.

My efforts were directed towards proving whether faradization of the anterior and lateral regions of the neck were of benefit in the epileptic attack.

In 1894-95 I published, in the Annual Report of the Hospital, the first results, which were very encouraging—results which I have confirmed in my work, "Medical Electricity," (Naples, 1897).

This is the method adopted:

A large electrode, well moistened and curved, is applied at the level of the thyroid cartilage, the other electrode is held by the patient in his hand or on the sternum. I always use on alternate days the faradic current of medium intensity, for fifteen minutes.

[Then follows an account of fifteen cases, the other seven not presenting themselves regularly at the dispensary. I shall quote only the first of these cases.]

(1) N.P., from Naples, thirteen years old. Nothing special in family history. At six months was seized with convulsions, which

were repeated after two months. At the age of two years, after a fall, the convulsions returned and occurred frequently. The convulsive attack had all the characteristics of epilepsy. He took bromide of potassium for thirty-three days, without benefit. Then he received electrical treatment for two months and the attacks have not been repeated. . . . . .

From observation of all these cases, we infer that the electrical treatment generally gives relief, since almost without exception, after a few sittings, it either diminishes the frequency of the convulsive attacks or makes them disappear entirely or for a long period. The other fifteen patients, not subjected to electricity, took bromide of potassium or sodium in pretty large doses and generally had no perceptible improvement. But how does the electro-faradic current, applied in the anterior region of the neck, act on epileptics? At present we cannot answer this question. We cannot say whether the lessening of the attacks is due to the action of the current on the nerves of the neck and thence on the cerebral circulation; or whether the faradic current in the neck, in the same way as the galvanic current, acts on the nerves of the neck, so as to modify the cerebral circulation; or whether the current, besides its action on the nerves of the neck, acts on other organs, perhaps not excluding the thyroid.

Suffice it to say for the present that faradization of the anterior region of the neck in epileptics diminishes, or causes to disappear, the convulsive attacks.—*Translated from "Giornale Internazionale delle Scienze Mediche," for* THE CANADIAN PRACTITIONER, *by Dr. W. Harley Smith.*

Progress of Medicine.

ORTHOPÆDIC SURGERY.

IN CHARGE OF

CLARENCE L. STARR, M.B. Tor., M.D. Bel. Hosp. Coll.,

Surgeon to Industrial Refuge.

Assistant Demonstrator of Anatomy, Toronto University.

Fracture of the Neck of the Femur in Children.

This is a condition which merits our attention on account of the fact that it is so often overlooked, and it is overlooked mainly because we fail to cultivate our powers of observation sufficiently, and secondly, because we so often neglect to make a careful examination of the patient stripped of all clothing.

Dr. Royal Whitman, of New York, who has given considerable attention to this subject, states as a result of his observations that since 1890 he has seen no less than thirteen cases of this injury in children between the ages of two and a quarter and eight years.

The fracture, being incomplete or of the green-stick variety, often escapes observation, as the child is able to walk immediately after the injury in the majority of cases. In these neglected cases the head becomes depressed or the trochanter elevated above Nelaton's line, and the symptoms resemble somewhat those of hip-joint disease, although the limitation of motion is only in the direction of abduction, extension being scarcely affected. Careful examination of the stripped patient with careful measurement will generally establish the diagnosis.

Dr. Whitman endeavors to correct the bending of the neck of the femur by a cuneiform osteotomy, although a simple osteotomy may sometimes suffice.

Tuberculosis or Sarcoma of Hip-Joint.

At a recent meeting of the San Francisco County Medical Society Dr. Harry Sherman read a very interesting paper which shows

the difficulty often experienced in making a diagnosis between tuberculosis and sarcoma of the hip-joint. The paper reported eight cases of amputation at the hip-joint. Four of the cases were tubercular and four sarcomatous. The differential diagnosis in two of the cases of sarcoma was only made at the time of operation, and the points of similarity of the two conditions were very clearly brought out.

Two of the four cases of tuberculosis recovered and are at present in excellent condition. One case died of shock within a few hours of operation, and one died of pulmonary tuberculosis three months after operation.

Of the four cases of sarcoma one is alive at present, seven years after operation.

In two of the fatal cases the termination was strangely alike. The first case showed no sign of recurrence for fourteen months; then suddenly a very severe and persistent pain appeared in the right side of the chest. The chest was aspirated on two occasions and a large amount of fluid blood drawn off. In a few weeks a similar condition commenced in left side, producing death in short time apparently from suffocation.

The autopsy revealed right lung apparently completely disappeared and only a small tumor taking its place in which no lung tissue was found. The space was entirely filled with blood.

Sarcomatous infiltration was found on anterior surface of left lung and the hæmorrhagic process begun.

The second fatal case presented almost exactly the same symptoms—pain in the chest, pressure and aspiration of fluid blood, followed by death shortly after onset of chest symptoms.

No autopsy was performed, but in all probability the same pathological condition was present as in preceding case—*Phil. Med. Jour.*

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF

PRICE-BROWN, M.D.,

Laryngologist to Western Hospital; Laryngologist to Protestant Orphans' Home.

Removal of Foreign Body from the Nose after Twenty-three Years.

S. W. Carruthers (*Brit. Med. Jour.*, Feb. 12, 1898) gives the history of a peculiar case. A little girl, seven years old, was pushed down, and got something in one side of her nose, which twenty-three years afterwards proved to be a stone. It always produced more or less irritation, and at the ages of eleven, thirteen, and twenty-seven she had polypi removed by different surgeons from the same nasal fossa, who, however, did not appear to have discovered the stone. When the woman was thirty Carruthers was consulted. He found a hard foreign body, lodged about an inch from the nares, above the inferior turbinated. He extracted it with forceps. He accounted for the comparative freedom of breathing through the affected nostril which the patient had always enjoyed to the position of the stone. The dimensions of the stone are not given, but it was large and nodular, and free from the calcareous deposits of which rhinoliths are composed.

Resection of Facial and Nasal Walls of the Antrum with Invagination of Nasal Mucous Membrane into the Cavity for the cure of Obstinate Crupynea.

Bonnereghaus (Archiv. fur Laryng. *und Rhinol.* Band VI., Heft 2.) A large number of patients suffering from antral disease remain uncured for years, in spite of treatment. For this condition the author describes a method of surgical treatment which he has used successfully in a number of cases.

First, any carious teeth of the superior maxillary on that side are removed and their alveoli scraped. An incision is then made down to the bone from opposite the second incision to the wisdom

tooth. The tissues are next dissected upwards to near the infra-orbital foramen. Then sufficient of the anterior wall is removed to allow of a thorough examination of the antrum. The necrosed bone on the nasal side is carefully dissected out, taking care to keep the nasal mucous membrane without perforation. Within the antrum itself the diseased mucous membrane is scraped from the underlying bone. Care is taken not to interfere with the bony walls of the lachrymal canal. The separated nasal mucous membrane which now forms the sole partition between the nose and antrum is pushed from the nose into the cavity and kept in position by strips of iodoform gauze. The mouth wound is packed also with iodoform gauze. In a few days the nasal mucous membrane will have adhered to the walls of the antrum. After-treatment consists in cleansing by blowing and washing out night and morning; the oval aperture remaining open for inspection and cleansing.

(Query: Would not the enlarged nasal cavity have a tendency to produce atrophitic rhinitis?)

Supra-Tonsillar Fossa and its Affections.

Donald R. Paterson (*Jour. Laryng.* etc., April, 1898), in a long article, draws attention to the existence at the upper and anterior side of the faucial tonsil of a fossa, hitherto looked upon as a mere tonsillar crypt, but in reality not in any sense of that nature. Having arrived at this conclusion from personal observation, he examined extensively into throat literature, but could get no light upon the subject, except that he found that His, in the year 1885, described the cavity as an "anatomical space." Later on, after more extensive investigation, His gave it the further title of "supra-tonsillar fossa."

A web of membrane, particularly in young subjects, is frequently found to be attached to the free border of the anterior pillar, extending downwards and backwards over the tonsil, called the plica triangularis, and it is between this plica and the upper portion of the tonsil that the supra-tonsillar fossa is found.

One of the chief features of the fossa is the tendency to the accumulations of tonsillar secretions within the cavity, induced by the presence of the plica, a kind of pouch having been formed. The object of treatment is free drainage, either by punching out the upper portion of the tonsil, or removal of a portion of the plica. Papilloma may form upon the plica; malignant disease has also been known to commence in the fossa, while foreign bodies have in a few instances been found lodged within it.

Papilloma of the Tonsil.

In the February number of the *Journal of Laryngology* a number of cases of papilloma of the tonsil were reported by different members of the London Laryngological Society. Although these neoplasms are common on the palate and pillars, records of their occurrence upon the tonsils have been exceedingly rare. At this meeting Hill, Wingrave, Wagelt, Butlin, Horne and Yearsley all reported cases. In all of them the attachment was pedunculated, and limited to a particular spot upon one tonsil. After removal no case of return has been reported.

Mention might be made here of a case reported by T. H. Machell, of Toronto, to the Toronto Medical Society several years ago, and published in the *New York Medical Journal*, Jan., 1895. In this case what were supposed to be papilloma studded the tonsils completely. They were all pedunculated, each growth having a distinct pedicle. The patient died of scarlet fever. This appears to be the only case on record of such widespread and diffuse papillomatous growths of the tonsil.

Two Cases of Laryngeal Spasm Fatal, in the First Attack, Occurring in the Same Family.

C. H. Hunter (*Brit. Med. Jour.*, April 2, 1898) gives a brief outline of these remarkable cases, both being perfectly well up to a few minutes before death, and occurring within two days of each other. The first was a boy nineteen months old, one of twins, the other having died a month after its birth. Just before his death his mother took him up to wash him. In a fit of passion he threw his head back and became livid and rigid. He was at once put in a hot bath; but this was of no avail. He died without uttering a sound, and before the doctor arrived. Two days later he was hastily summoned to the boy's sister, aged seven months. The doctor arrived within two or three minutes but found the baby dead. The mother said in this case that the child was lying perfectly well and quiet in her arms. Suddenly without any screaming, the baby became rigid and blue in the face, and died without uttering a sound, just as her brother did.

In both cases there were well marked carpo-pedal contractions, but no general convulsions. In neither case had there been crowing respiration. In the post-mortem examinations all the organs were found healthy. There were no laryngeal obstructions, but there were some indications of rickets. Frederick Taylor says that

rickets is found in seventy-five per cent. of the cases of laryngismus stridulus. This might be the predisposing cause in these cases.

Recurrent Membranous Pharyngitis.

Middlemas Hunt (*Jour. Laryng.*, Feb., 1898) reports a case of this disease in a middle-aged lady which had lasted for 19 years. The attack would begin with acute sore throat, followed by formation of membrane over the left tonsil and wall of the pharynx, and also on the left side of posterior surface of epiglottis. This would last for a week or two and then gradually disappear. After a similar interval it would be repeated. This went on year after year for the whole of that time, with the exception of a period of four months, when she was confined to bed from injury to the foot. The membrane on the epiglottis was not continuous with that of the pharynx.

Microscopical examination proved the absence of Klebs-Loeffler bacillus, but the presence of streptococci and staphylococci. Middlemas Hunt was of the opinion that the disease had each time been artificially produced. He ascertained that the patient had a prescription for Liquor Epispasticus repeated at long intervals. He had given this to her some months before the trouble originally began.

In reference to this matter, French soldiers have been known to escape duty by producing artificial membranous sore throats, resembling diphtheria, by rubbing in powdered cantharides with the finger.

Multiple Papillomata of the Larynx in Young Children Treated by Tracheotomy Only.

T. C. Railton (*Brit. Med. Jour.*, Feb., 1898) gives the history of two little girls, aged respectively three and four years; both had multiple laryngeal papillomata: tracheotomy in each case gave immediate relief to respiration. One required to wear the tube for forty-five months before the growths were all absorbed; the other for twenty-five months. In each case the child made a good recovery eventually without any return of the papilloma. At first silver tubes were worn, then soft rubber ones. The latter were renewed three times a week. In his remarks, the writer attributes the spontaneous atrophy of the growths to the removal of the irritation of respiration and coughing.

Impaction of Coin in Œsophagus: Ulceration into Aorta: Death.

T. H. Hawley (*Brit. Med. Jour.*, March, 1898) was summoned to attend a boy aged four years seven months, suffering from collapse, after vomiting a pint of blood. His condition varied for ten hours; then another violent attack of hæmatemesis was followed by immediate death.

The history showed that six months previously the boy had swallowed a halfpenny. From this time forward he complained of pain on the right side of the throat after swallowing food, which had always to be of a semi-fluid nature. There had been no loss of flesh, no bleeding, no vomiting, no regurgitation.

On post-mortem examination the halfpenny was found impacted in œsophagus about an inch below the level of the aortic arch. The edges in contact with the œsophagus had formed two deep ulcers. The one on left had eaten into the descending aorta, making an opening large enough to admit of a quill.

Œsophagotomy and Removal of Dental Plate with Upper Central Incisor Teeth.

A. A. Snyder (*New York Med. Jour.*, Sept. 1897) gives the history of the case. A woman, aged 22 years, had swallowed a broken dental plate. It lodged in the œsophagus. The voice became affected, and she complained of pain on the left side of the sterno-clavicular joint. Owing to irritability of the parts, even under cocaine, removal by the natural passage was impossible. On the third day, having localized the foreign body, a two-inch incision was made along inner edge of sterno-mastoid muscle. The jugular vein and common carotid were exposed, and the œsophagus being entered through the wound, the plate was extracted. The size was one and a half inches by one and a quarter. The patient made an excellent recovery. In this case the X rays were tried but failed to locate the foreign body.

Editorials.

THE ONTARIO MEDICAL ASSOCIATION.

THE eighteenth annual meeting of the Ontario Medical Association will be held in the Normal School buildings, St. James' square, Toronto, June 1 and 3. We are informed by the General Secretary, Dr. John N.E. Brown, that the two important committees in connection with the meeting have completed their arrangements. The committee on papers, under the chairmanship of Dr. A. McPhedran, have framed a provisional programme which gives good promise. An effort will be made to have a smaller number of papers read and longer discussions than we had last year. There was certainly a general feeling at the meeting in 1897 that the discussions were altogether too brief. We hope the committee will not go to the other extreme this year of allowing proceedings to drag and become tiresome. It is only fair to say in this connection that the work of the different committees on papers during the last few years has been admirable in all respects, and the efforts of the committee for this year are likely to prove equally satisfactory.

The programme of the Committee of Arrangements will be somewhat similar to that of last year. The visiting members will be entertained at luncheon in the building of the Royal Canadian Yacht Club; and, if the weather is fine, they will probably be taken for a short cruise on the lake. Dr. G. Stirling Ryerson, the chairman of the committee, will preside at the luncheon. Although this entertainment last year was very enjoyable there was a slight feeling of weariness before its close. There was too much speaking. Three or four bright crisp speeches after luncheon go very well, but it is quite unnecessary to toast the whole creation. We publish in another column a list of papers promised up to the time of writing.

THE TREATMENT OF INEBRIATES.

WE are glad to publish in this issue an interesting letter from Dr. A. M. Rosebrugh, of Toronto, on this important subject. It is generally recognized by the profession, and, to some extent at least, by the general public, that inebriety is, in itself, a disease rather than a crime, and requires most judicious and careful treatment. Under such circumstances it is not advisable to imprison habitual drunkards with ordinary criminals; and yet some restraint should be placed upon them, because unbridled freedom for such people means danger to themselves and the public.

Dr. Rosebrugh has taken great interest in the subject for many years, and his opinions are, therefore, worthy of very careful consideration. The recommendations which are given in his letter are all in the right line, although it may be difficult to carry them all out within a short time. Although the Ontario Legislature has done much in the way of establishing and supporting many worthy charities, such as hospitals, asylums, etc., it is not up to date with reference to the proper treatment of inebriates and epileptics.

We are glad to notice in Dr. Rosebrugh's letter a timely suggestion as to combined treatment of these two classes of unfortunates in a large farm-colony. The Ontario Medical Association has made representations to the Government in these matters in the direction indicated by the doctor. We believe that only questions of economy cause the Government to delay action, and a little more pressure may induce its members to believe that false economy will in the long run prove to be quite expensive. Without discussing such considerations, we have to say that there is a strong feeling existing in the minds of our profession that in the interests of humanity something should speedily be done in the way of properly caring for both inebriates and epileptics.

THE GENERAL MEDICAL COUNCIL OF GREAT BRITAIN.

THE Medical Council of Great Britain is the supreme administrative body of the profession in England, Scotland, and Ireland. After the death of the late president, Sir Richard Quain, considerable interest was taken in the election of his successor. There was a pretty general feeling that Sir William Turner was eminently fitted for the position on account of the great executive ability he had shown in connection with the work of the Executive

Committee, of which he had been a member since 1887, and that of the Business Committee since 1892, and also on account of his high standing and reputation, which was world-wide. The only objection which could be raised against him was that he resided in Edinburgh, while many thought the president should reside in London, in order that he might be in constant touch with the central office of the Council. Some hoped that he might be induced to remove to London.

But, as it happens, residence in Edinburgh is not considered a drawback, as the following remarks by Mr. Teale, when he was proposing Sir William for the presidency, show: "There was also an accidental advantage in finding a man like Sir William Turner, namely, that he was a member of the Scottish Branch. The Council was not an English Council, but a Council of Great Britain and Ireland, and it was a desirable thing that now and then the more Imperial character of the Council should be emphasized by going outside England for its president."

Dr. Bennett seconded the proposition, and Sir William was unanimously elected. His election will afford eminent satisfaction to his numerous friends in Canada. He took an active part in the proceedings of the meetings of the British Science Association in Toronto and that of the British Medical Association in Montreal last summer; and, after Lord Lister, none was more popular than he. While in Toronto, he was the guest of Dr. Grasett, and met many members of the profession in a social way. Those who heard him at the various scientific meetings were impressed by his great ability, while those who met him outside of *shop* and science were charmed by his genial and kindly courtesy.

(Since the writing of this article we found the following note in *The British Medical Journal*: "We are informed that it is not Sir William Turner's intention to resign the Chair of Anatomy in Edinburgh University, and that the rumor that he would take this step in consequence of his election to the presidency of the General Medical Council is unfounded.")

Meetings of Medical Societies.

TORONTO CLINICAL SOCIETY.

Regular meeting held April 13th. Dr. Albert A. Macdonald, president of the society, in the chair.

The minutes of the March meeting were read and adopted.

The following fellows were present: Dr. Nichol, of Baden; George Elliott, William Thistle, William Aikens, Charles Trow, Graham Chambers, Elliott Brown, Geoffrey Boyd, Herbert Hamilton, Frederick Fenton, William Oldright, J. Algernon Temple, Herbert A. Bruce, William Pepler, LeM. Grasett, Albert A. Macdonald, George A. Bingham.

Dr. Herbert A. Bruce read a paper on "The Surgical Treatment of Osseous Ankylosis of the Temporo-Maxillary Articulation."* Dr. Bruce presented the patient for examination.

Dr. Grasett said this was the first case of the sort he had ever seen. He thought the result was very satisfactory.

Dr. Peters said he had seen one of the operations, at which time there was very little movement. His recollection was that the coronoid was not ankylosed by bone to the skull. The first week after the second operation the patient could voluntarily open the mouth so that there was a distance of three-quarters of an inch between the lower and the upper jaw. Probably a larger portion of bone might have been removed, but if much more had been removed the chin would have been drawn too much to one side of the mid-line of the face. Rather than this he thought it preferable to sacrifice one-quarter of an inch in the distance the jaws could be separated. He considered the result a very good one.

Dr. William Oldright drew attention to the comparative smallness of the teeth in the lower jaw. He had seen one case similar to the one presented, in which an attempt was made at breaking down the ankylosis by means of gags.

Dr. Pepler and Dr. Boyd made some brief remarks on the case.

Dr. Bruce replied.

* Will be published in June issue.

Dr. J. A. Temple presented: (1) Two ovaries in a state of cystic degeneration, which he had removed from a woman with a fibroid of the uterus. (2) A pus-tube, non-adhesive, from a woman, the wife of a farmer and mother of several children, who gave no history of symptoms. (3) A cystic ovary from a woman who had suffered from retroflexion of the uterus and prolapse of the ovary. (4) A fibroid tumor of the uterus which was causing great pain.

Dr. Grasett referred to the second case and Dr. Fenton to the last.

Dr. Pepler discussed the diagnosis of pus-tubes.

Dr. Oldright reminded the society of a pair of pus-tubes he had removed intact, and presented at the society last year.

Dr. Macdonald reported a case of amputation of the cervix uteri for carcinoma. The patient was a delicate woman, aged forty-five, who had a number of children, and had miscarried several times. When he first saw her two weeks ago, the question was whether he should remove the whole uterus, in which the mortality by vaginal hysterectomy is about fifteen to twenty per cent. The mortality from amputating the cervix being only two per cent., and the results about as good as the more serious procedure, he decided to amputate the cervix. He thought it added two or three years to the patient's life.

The nominations for the ensuing year were made.

TORONTO PATHOLOGICAL SOCIETY.

THE regular meeting of this Society was held in the Biological Department of Toronto University, March 26th.

Dr. H. B. Anderson, president, in the chair.

Present—Drs. McPhedran, Reeve, Wishart, Silverthorne, Pepler, Primrose, Rudolf, H. H. Oldright, Wm. Oldright, Peters, Wilson, Bruce, Amyot, Goldie, Carveth, McKenzie, Anderson, Parsons. Visitor, Dr. Small.

Meeting called to order at 9 p.m. Minutes of last meeting taken as read and adopted.

Fresh Specimens.—Dr. Wm. Oldright showed a fæcal concretion removed from an appendix.

Mr. J. J. McKenzie read a paper on the pathological changes in the chromophilous granules in nerve cells. (To be published later).

Dr. H. H. Oldright's paper on "Anomalies of Dentition" followed.

ANOMALIES OF DENTITION.

By H. H. Oldright, M.D., Toronto.

Anomalies of dentition, other than cases of dentigenous cysts, which may be found in various parts of the body, notably in the ovaries, may be classed according to the time of development and with reference to their situation and size.

I. *Late Development.*—Flint (Wm. Henry) says that:—In the different diatheses, struma, syphilis and rachitis the deciduous teeth may not erupt till a late period, as in a case cited by Steiner, 1885, where the teeth were not cut till the fourth year.

We may even have, as Charles Sarazin reports, complete absence of both sets from want of development of the dental follicles or disease of the alveolar process.

There may be symmetrical absence of certain teeth, the incisors, canines and wisdom teeth.

The first set may be perfect, the permanent set imperfect.

Supernumerary teeth may be present from the development of an extra follicle, or the segmentation of a follicle.

II. *Early Development.*—It is said that Louis XIV. and Mirabeau were each born with a complete set cut. In these cases the roots are, as a rule, rudimentary, and either fall out or decay early.

Albrecht has reported cases where the canines and molars being erupted at birth were retained for thirty years and upward. Here there would probably be non-development of the second dental follicles.

He explains the occurrence of a supposed third set by the fact that a tooth may be retained till old age and then appear from atrophy of the jaws.

Abnormal position.—This may be due to development of dental follicles in an abnormal position, *e. g.*, in the ramus or condyle of the lower jaw, the middle of the hard palate or nasal fossal; or *obstruction* due to milk teeth being too firmly set or the cavity ossifying over the second tooth after removal of the first. Obstruction may also be caused by narrowness or shortness of the alveolar margin or abnormal direction of the whole alveolar process, the normal direction being either vertical or inclining slightly inwards, the upper set overlapping those of the under jaw. The narrowing of the margin may be caused in rickety children by the pressure between the labial muscles and the tongue.

Anomalies in size may occur, the single teeth may be over-developed, or three of them may have a continuous outer coating of cement and enamel (seen chiefly in the incisors).

The case which I will record to-night belongs to the class with early eruption. Dr. J. W. Ballantyne, of Edinburgh, in a paper read before the Edinburgh Obstetrical Society in March, 1896, on "Congenital Teeth, with three illustrated cases," deals very thoroughly with these anomalies. In the first described by Dr. A. M. Vargas, of the University of Barcelona, there was an elevated outgrowth from the margin of the lower jaw, which before operation was thought to be a congenital neoplasm, but, being cut into, it proved to be a premature tooth enclosed in an extra alveolar sac.

It was covered with mucous membrane and an inner layer of very vascular connective tissue and was movable at the base. There was no root.

In the second case occurring in his own practice, two bright white, thin, slightly-movable teeth (lower central incisors) were present at birth, which the mother said were absorbed, but which Dr. Ballantyne thinks probably dropped out. There was a tubercular family history. They were replaced at seven months by two new teeth.

The third case is described by Dr. R. C. Buist:

The two lower central incisors at birth projected above the gum, the right two mms., the left less. They were movable backward and forward. The gum at the roots was swollen and everted before and behind, this becoming less in a few days when the teeth were more firmly held. They both came out during the first month and it was stated that they felt like gristle. They have not been replaced. Dentition was otherwise normal.

I might now describe the case which occurred in my practice a year ago, the two lower central incisors being present at birth. When two days old the boy wounded his mother's nipple, an abscess resulting in spite of antiseptic treatment and the use of a shield.

Strumpbell advises removal if the teeth are loose. In this case the teeth were not drawn for certain reasons. They were set in a movable, hinge-like process of the alveolus raised above the level of the gum about one-third of an inch. Below the hinge and at the symphisis there was an exostosis, which has since disappeared.

A few days after birth the child developed a pempigous eruption and at six weeks snuffles and a papular syphilide.

The father had contracted syphilis twelve years before and had been under treatment with iodides and mercury for two years at

that time. The first child, born ten years ago, died from congenital syphilis and there have been none since.

To return, in the meantime the teeth had become firmly set, and the hinge had lost both its elevation and mobility. Shortly afterward the crowns softened, losing their lime salts and leaving the pulp cavities exposed as they are at present level with the gum. We will probably scoop out and fill with gutta percha or cement. No other teeth have since arrived. I sent an account of this case to Dr. Ballantyne, whose reply was most courteous and was as follows :

DEAR DR. OLDRIGHT,—The editor of *The Edinburgh Medical Journal* sent on to me your record of an interesting case of congenital teeth. Allow me to thank you for this record which contains several new features. I find the after history of these teeth when they are not removed at once is rather obscure. In some cases they are certainly replaced by milk teeth and are then really supernumerary as well as previous, but in other cases they seem to be the only milk teeth which the infant has. The exostosis is interesting, but its meaning is far from clear. Since I wrote my paper I have had several records sent me, and two of these I have embodied in an article on "Congenital Teeth" in the forthcoming supplementary volume of "Keating's Cyclopædia of Diseases of Children." In one of these the child presented by the face, and the teeth were diagnosed before delivery—a truly unique circumstance, I suppose. I send you a reprint of my paper, also one of another curious case of abnormal dental development. I am specially interested in all congenital anomalies and shall always be glad to hear from you regarding such. The syphilis may have had to do with the early decay of the congenital teeth in your little patient, but I scarcely think it could be regarded as the cause.

Believe me, yours faithfully,

J. W. BALLANTYNE.

24 Melville street, Edinburgh, Feb. 7th, 1898.

Dr. Ballantyne very kindly sent me his monograph from which I will quote his conclusions :

(1) Congenital teeth form a rare anomaly, but one which has long been known both to the profession and to the public.

(2) Their presence has often an ill effect upon lactation, partly on account of imperfect closure of the infant's mouth and partly by injury to the mother's nipple; sublingual ulceration may also result, and infantile diarrhœa and atrophy are more distant consequences. Sometimes, however, symptoms are altogether absent.

(3) Congenital teeth have probably little or no prognostic significance as regards the bodily or mental vigor of the infant carrying them.

(4) The teeth usually met with are lower incisors, but sometimes upper incisors may be seen, and very rarely molars of either upper or lower jaw. Other facial or buccal malformations may occasionally be met with.

(5) They are caused by premature occurrence of the processes which normally lead to the cutting of the milk teeth; in a few cases it would seem that the anomaly is due to a true ectopia of the dental follicle and its contained tooth.

(6) In a few cases a hereditary history has been established.

(7) As congenital teeth are usually incomplete and ill-developed, and likely to be more an inconvenience than an advantage to the infant, they are best removed soon after birth, an operation which can be easily, and, except in very rare instances, safely, performed.

(8) The occurrence of premature teeth in certain well-known historical personages is an interesting fact, the importance of which has been much exaggerated.

Under pathogenesis he gives as the predisposing causes:

(1) Ectopia.

(2) Imperfect development of tooth and absence of fang to fix it deeply.

(3) Too early deposit of salts.

(4) Atrophic state of gum.

(5) Intra-follicular inflammation and ulceration of gum.

Under frequency of occurrence, Paris Maternity, out of 17,578 new-born infants, 1858-1868, three had teeth—one in 6,000.

In 20,000 births Blot had not seen an instance.

Besnier and Gueniot regarded them as very common.

The truth lies between the two extremes. In Dr. Ballantyne's paper he has gathered together from literature some seventy cases, and he says that doubtless not a few have escaped notice.

I will give part of the doctor's historical section in which he names the famous personages, Richard III., Louis XIV., Richelieu, Mirabeau, and Mazarin. Shakespeare, in King Richard III., Act II., Sc. 4, makes the Duchess of York say:

"Marry, they say my uncle grew so fast
That he could gnaw a crust at two hours old;
'Twas full two years ere I could get a tooth."

Also in Act IV., Sc. 4, of the same play Queen Margaret says:

"That dog that had his teeth before his eyes."

And in King Henry the Sixth, Part III. Act V., Sc. 6, the following words occur:

"Teeth hadst thou in thy head when thou wast born,
To signify, thou cam'st to bite the world."

And Richard himself says:

"For I have often heard my mother say
I came into the world with my legs forward;
The midwife wondered and the women cried
O Jesus, bless us, he is born with teeth,
And so I was; which plainly signified
That I should snarl, and bite, and play the dog."

Mr. Mackenzie, discussing Dr. H. H. Oldright's paper, pointed out that recent study showed that there were evidences of four sets of teeth in the mammalia, a prelacteal and first permanent set being indicated by slight traces of tooth gums. It was thought that supernumerary sets of teeth were ataccolic in character.

Dr. Rudolf, discussing Dr. H. H. Oldright's paper, asked if Dr. Oldright had heard of congenital teeth being lucky.

Dr. Pepler spoke of a girl of 21 years with only one set of teeth.

Dr. Oldright replied.

Dr. Oldright also reported a case of tubercular infection of the inguinal and pelvic glands from a cut in the sole of the foot.

Patient was twelve years of age, came under his care two and a-half months after receiving a wound from a nail in the sole of the right foot. The glands in Scarpa's triangle were enlarged and inflamed. One had previously been opened, another contained pus.

The wound in the foot had not healed and showed a granular ulcerating surface about one-third of an inch in diameter. Counslips from this showed staphylococci. There was also an enlarged gland lying external to the external iliac artery, about an inch above Poupart's ligament.

Sections of the glands after removal confirmed the diagnosis of tuberculosis. The diseased pelvic glands were removed later and proved to be tuberculous also.

The speaker believed this to be an instance of true infection by entrance of tubercle baccilli at the wound in the foot. It might be, however, that there had been a previous tubercular condition of the glands, and a secondary infection by pyogenic bacteria determined the suppuration. The popliteal glands were not involved.

Senn, of Chicago, thinks that the leucocytes can by their dia phe-

desis explain the occurrence of infection of glands where the sequence of involvement is in a direction against the lymph current, the leuco cytes carrying the bacilli through the tissues.

Dr. Primrose referred to a case reported by him a few years ago in which tuberculous injection of the axillary glands followed vaccination in a child. The vaccination wounds remained as open ulcers, and were excised along with the glands. The history showed that the enlargement of the glands in the axilla followed the vaccination. The microscopic examination of the glands exhibited characteristic tubercle.

Dr. A. McPhedran showed a specimen of "primary carcinoma of the liver" from a man aged sixty-three. He was a farmer of good family and personal history. His health began to fail in September, 1897. He complained of failing strength and loss of appetite with indigestion. There was no pain. The asthenia became more marked. In the end of January, 1898, the prostration was marked; there was no jaundice, the stools were of normal color, the urine contained no bile pigment. The stomach was dilated and contained ten ounces of grumous remnants of food. The temperature was slightly but irregularly elevated. The liver was uniformly large, reaching two finger-breadths below the costal margin, very tender, markedly indurated and minutely nodular. A few days before death (February 16) he became suddenly deeply jaundiced.

Autopsy: Liver large, very hard, nodular, the largest nodule at the posterior border. Some of the glands behind the liver were somewhat enlarged. The other abdominal organs were unaffected.

Dr. Peters discussing Dr. McPhedran's paper said: While theoretically it is doubtless quite possible that there may be a primary carcinoma of the liver, it is well known that a primary focus of very small dimensions in any part of the portal circulation may give rise to secondary growths in the liver, and consequently a most thorough search of the whole area tributary to the liver should be made before any carcinoma of the liver should be classed as primary in character.

Dr. Anderson also discussed the case.

Dr. Pepler referred to a similar case.

Dr. McPhedran replied.

Dr. Peters reported a case of spindle-celled sarcoma of the thigh bone, with microscopic preparations.

Amputation at the hip-joint was performed, and there has been, so far, no recurrence (seven months after operation).

L. H., æt 11. Admitted to V. H. S. C., August 18, 1897. Good family history. No tubercle or syphilis in family.

There was no history of injury. Four months before admission she complained of pain in the left leg. Swelling about the upper third of the thigh was noticed about the same time. She lost flesh rapidly and suffered a great deal. At time of admission she was unable to walk.

On examination a fusiform tumor about 6 inches in length was found extending downwards from the middle of the left femur. The right thigh measured 9¾ inches, and the left 13 inches in circumference over the tumor. There was no enlargement of the inguinal glands, but atrophy of the muscles of the left side was marked.

The sarcoma was found to have infiltrated the muscles somewhat extensively. It had apparently commenced beneath the periosteum, and had spread so as to entirely surround the bone, and to project about equally from all aspects of its circumference. The bone was eaten away on the surface but not to such an extent as to materially weaken it.

On microscopic examination the tumor was found to be a large spindle-celled sarcoma.

A committee, consisting of the president, Dr. A. McPhedran, and the recording secretary, was then appointed to act with the committees from the other medical societies *re* the formation of an Academy of Medicine.

The meeting then adjourned.

H. C. PARSONS,
Recording Secretary.

Correspondence.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—The many articles that have been written concerning the Victorian Order of Nurses have induced me to give you the plan of caring for the sick poor that is now being successfully carried on in our town. A plan similar to the Victorian Order was tried before the present one was adopted. A trained nurse was hired to do missionary work *a la* Victorian Order for a year, and it proved a lamentable failure. The present system has been followed for more than a year and there is no desire to give it up. The beginning of the present system is due to Mr. J. Penman. In consultation with him in regard to the matter of nursing the sick poor, after a trial of the so-called district or missionary nursing, we visited several of the women in our town accustomed to go out nursing, women who are not known as regularly trained nurses or graduates, but those who have spent many years in nursing the sick, and especially labor cases, and as every physician knows they are the equal, if not the superior, of the trained nurse in caring for the newly-born child. I think you will find such women in every town, and in every ward in a city, women who besides a good general knowledge, have mastered fairly well the care of the household generally, and who do not think it menial work to have a house put in order, who can cook a good plain meal, and who can wash and iron and even scrub. We have such women in our town. They have been tried and are not found wanting. One of them is under a regular engagement. If employed for the whole month is paid in full, if not employed, gets a retainer. She is allowed to do other work if there are no sick poor requiring her services. If engaged there are other women on her list who seem glad to assist at any time. There are always a few women of the sort I have mentioned who are glad to be employed, if only for a few days or a week at a time. So far we have had no difficulty in regard to this matter.

I shall mention one case to show how well the system is working. Last summer Mrs. B. was taken ill with chorea, pregnant six months. Her husband and two little children made up the family. The house was a scene of destitution too painful to describe. The disease developed so rapidly that it looked like prejudicing her case to send her to the nearest hospital, seven miles away. Mrs. S., the nurse, was sent to the family. Kind people supplied immediate wants, and only those who know how serious some choreic cases are will understand the situation. It was impossible to keep the woman from injuring herself, so violent were the jerkings. With the help of the nurse, and a little extra assistance, the poor woman was safely carried to full time and gave birth to as healthy a looking child as one ordinarily sees. For several days when the disease was at its height I fully expected labor would require to be induced. Had we not had this nursing system the poor woman would have gone to the hospital at some risk. The children would have been cared for by the Children's Aid Society. And the poor husband! well, I don't know what he would have done. At the time of his wife's seizure he had just obtained work. This woman is now in very good health and the family are all together. Our nurse as a rule is not always so severely taxed as with this case. In fact some months she has no poor nursing, but it is a relief to think if a case arises it will be cared for, thanks to the philanthropic spirit of Mr. Penman. Now I feel assured that, if there are women of the kind I have mentioned in every town, in every municipality, there are philanthropic spirits also. These women are on the ground. When not engaged they have the enjoyment of their own homes. I need not, Mr. Editor, make further comment on what has been rendered self-evident, that the homes of our sick poor are made clean and habitable. Who would dare to look upon such work as menial? Does not the surgeon invade the abdominal cavity, ofttimes in a most foul, septic condition, of the poorest of the poor, as has been known, at the risk of his life, without considering his work ended until every vestige of septic matter has been removed? Why not care for the houses of the sick poor? But I did not intend to make any comments.

Yours faithfully,

W. BURT.

PARIS, April 20th, 1898.

Editor PRACTITIONER:

DEAR SIR,—Your editorial in the April issue of your journal relative to the medical department of our military system is right, and it is high time a re-organization took place. While the other departments have advanced we are in the same old rut that existed twenty years ago. I think, sir, we have now a Director-General, Surgeon Lt.-Col. Neilson, who will do all he can to promote the efficiency of the medical staff. There is no doubt that we have been severely neglected in the past, and, now, let us rise in our might, and urge the Government to redress our wrongs; and, by doing so, we may strengthen the hands of our efficient Minister of Militia, Hon. Dr. Borden. I would suggest that an organization, composed of the medical officers of all the military corps in Canada, be formed. All matters pertaining to our department could be discussed; and, if necessary, our grievances might be embodied in a set of resolutions which could be presented to the Minister of Militia. I know we have doctors in the House of Commons, members of the medical staff, who will assist us with all their might. One complaint I have is this, viz., that the average surgeon-major does not know what kind of a military outfit to buy, and, furthermore, there seems to be no one to inform him; and yet he may be subjected to a reprimand from the D.O.C. for not appearing properly dressed at the military camp. I think there should be two surgeons to a battalion, and I would encourage the formation of ambulance corps as much as possible, and not do away with existing ones. I would like the question of rank (relative or substantive) thoroughly sifted and settled, as I cannot understand it.

Yours truly,

SURGEON-MAJOR.

THE TREATMENT OF INEBRIATES.

To the Editor of THE CANADIAN PRACTITIONER:

SIR,—During the last ten or twelve months a persistent attempt has been made with a view to the introduction of proprietary remedies for the medical treatment of the inebriate inmates of the Central Prison and the county gaols of the Province.

Strong pressure has been brought to bear on the Ontario Government, and an attempt has been made to secure the influence and co-operation of the Prisoners' Aid Association to this end. Largely as a result of this agitation I was commissioned at the January

monthly meeting of the latter association to visit Canadian and American inebriate hospitals and to interview specialists in inebriety with a view to the formulating of a well-digested, practical scheme, to be submitted to the Government, covering the whole question of the treatment of our inebriate population. In executing this commission I visited in Canada the Homewood Retreat, Guelph, the Lakehurst Sanitarium, Oakville, and the Keeley Institute, Toronto; while in the United States I visited the Washington Home, the Woman's Home, and the Baker Gold Cure, Boston, the Hospital for Dipsomaniacs and Inebriates, Foxboro, and the Walnut Lodge Sanitarium, Hartford, Conn. I also had an interview with Dr. L. D. Mason, of Brooklyn, a well-known specialist and son of the late Dr. Mason, one of the pioneers in the study and cure of inebriety. In the further execution of my commission I availed myself of all the literature procurable, including the last edition of "Inebriety, or Narcomania," by Dr. Norman Kerr (720 pages), and the back volumes of *The Quarterly Journal of Inebriety*. My report has been presented to the Prisoners' Aid Association; but, as its consideration has been deferred until next meeting, it has not as yet been forwarded to the Government. The following is a summary of my recommendations, which are partly the result of information recently obtained, and partly the result of study extending over a period of several years:

"(1) The appointment by the Lieutenant-Governor-in-Council of an Inspector of Inebriate Institutions. This inspector should be a qualified medical practitioner who has made the medical treatment of inebriety a special study. (2) The inspector should organize in the city of Toronto an hospital for the medical treatment of pauper male inebriates of the more hopeful class, and in the other cities of the Province an inebriate department in the existing general hospitals, more especially for pauper male inebriates. (3) An industrial reformatory should be established on the farm-colony plan for the custody of the more hopeless or incorrigible class of male drunkards, and where they should be detained on indeterminate sentences. (4) Pending the opening of an inebriate hospital in Toronto, it would be both humane and in the interests of prison reform to give special medical treatment to the dipsomaniac inmates of the Central Prison. (5) For the more hopeful class of female inebriates, cottage homes (or utilizing existing homes) are recommended for special medical treatment. (6) For the incorrigible class of female drunkards full two-year sentences to the Mercer Reformatory for Women are recommended. (7) In the adoption of scientific medi-

cal treatment the Norman Kerr-Crothers system, or general plan, is recommended. In the interests of science and good morals proprietary remedies should not be used. (8) The adoption of the 'probation system' for giving a helping hand to patients subsequent to treatment of inebriety."

About two and a half years ago a deputation from the Ontario Medical Association waited upon the Ontario Government for the purpose of urging the establishment of an industrial reformatory in the province for habitual drunkards. Petitions have also been sent to the Government by the Ontario W.C.T.U., by the Prisoners' Aid Association, and by other public bodies with regard to the great need of a reformatory for inebriates ; but the Government declines to take action, although some members of the Government admit that something should be done for the unfortunate class referred to.

The Ontario Medical Association has also asked the Ontario Government to make provision for the custodial treatment of epileptics. I would suggest, in this connection, that it would be both a wise and an economical arrangement to provide a large farm-colony for both classes under one management, the epileptics and the inebriates being provided for either on the same or on an adjoining farm-colony. Many of the inebriates could be utilized as farm helps, nurses, guards, etc., on the farm-colony for epileptics.

It is self-evident, it seems to me, that by carrying out the scheme herein formulated with regard to the treatment of male and female inebriates the cost would be reduced to a minimum, and the number of chronic inebriates remaining to be provided for at the Mercer Reformatory for Women or on the farm-colony plan for men would be reduced to small proportions.

With regard to the results of medical treatment, I find that from 80 to 90 per cent. remain sober for periods varying from a few weeks to several months, and that from 30 to 50 per cent. may be cured by care and judicious after-treatment. There is a system in operation in Massachusetts whereby drunkards, instead of being imprisoned, are placed under the supervision of an officer called a probation officer. My proposition is to utilize this system for the purpose of giving a helping hand to patients subsequent to treatment for inebriety. Much good can be accomplished in the cause of temperance by finding employment for reformed inebriates. It is too much to expect that a reformed drunkard will remain long temperate if he fails to find employment. Hence the necessity of making the necessary provision for meeting this felt want.

It will be observed that in my recommendations I make mention of what I call the "Norman Kerr-Crothers" system of medical treatment. By this I mean medical treatment on sound principles of therapeutics such as is given in Dr. Norman Kerr's treatise on inebriety, and as endorsed by Dr. T. D. Crothers in his article on "Alcoholism" in Hare's Practical Therapeutics.

If the scheme as here outlined should commend itself to the best judgment of the profession in Ontario I would suggest that action be taken in this important matter at the approaching annual meeting of the Ontario Medical Association. Inebriety is now recognized as a disease, and as such has a claim upon the profession fully equal to that of insanity, tuberculosis or epilepsy. Allow me to bespeak, Mr. Editor, the weight of your influence and that of THE PRACTITIONER in the direction indicated.

Yours truly, A. M. ROSEBRUGH, M.D.

Toronto, April 30, 1898.

Book Reviews.

Books received.

THE TREATMENT OF SARCOMA AND CARCINOMA BY INJECTION OF MIXED TOXINS. By C. Mansell Moullen, M.D., Oxon., F.R.C.S, Surgeon and Lecturer on Surgery at the London Hospital, Examiner of Surgery at the University of Oxford, etc., etc. Price 3s. 6d., ($1.) London: John Bale Sons & Davidson, Ltd., 85-89 Great Litchfield street—Oxford street, W.

AN AMERICAN TEXT-BOOK OF GENITO-URINARY AND SKIN DISEASES. Edited by L. Bolton Bangs, M.D., late Professor of Genito-Urinary and Venereal Diseases, New York Post-Graduate Medical School and Hospital; and William A. Hardaway, M.D., Professor of Diseases of the Skin, Missouri Medical College. Octavo volume of over 1,200 pages, with 300 illustrations in the text, and 20 full-page colored plates. Prices: Cloth, $7 net; sheep or half morocco, $8 net. Philadelphia: W. B. Saunders; Canadian agents, J. A. Carnech & Co., 413 Parliament street, Toronto.

MOORE'S ORTHOPŒDIC SURGERY. A Manual of Orthopœdic Surgery. By James E. Moore, M.D., Professor of Orthopœdics and Adjunct Professor of Clinical Surgery, University of Minnesota, College of Medicine and Surgery. 8vo., 356 pages, handsomely illustrated. Cloth, $2.50 net. Philadelphia: W. B. Saunders. Canadian agents: J. A. Carnech & Co., 413 Parliament street, Toronto.

CHAPIN ON INSANITY. A Compendium of Insanity. By John B. Chapin, M.D., LL.D., Physician-in-Chief, Pennsylvania Hospital for the Insane; late Physician-Superintendent of the Willard State Hospital, New York, etc. 12mo, 234 pages, illustrated. Philadelphia: W. B. Saunders. Canadian agents: J. A. Carnech & Co., 413 Parliament street, Toronto.

KEEN ON THE SURGERY OF TYPHOID FEVER. The Surgical Complications and Sequels of Typhoid Fever. By Wm. W. Keen, M.D., LL.D., Professor of the Principles of Surgery, and of Clinical Surgery, Jefferson Medical College, Philadelphia. Octavo volume of 400 pages. Cloth, $3 net. Philadelphia: W. B. Saunders. Canadian agents: J. A. Carnech & Co., 413 Parliament street, Toronto.

VAN VALZAH AND NISBET'S DISEASES OF THE STOMACH. Diseases of the Stomach. By William W. Van Valzah, M.D., Professor of General Medicine and Diseases of the Digestive System and the Blood, New York Polyclinic; and J. Douglas Nisbet, M.D., Adjunct Professor of General Medicine and Diseases of the Digestive System and the Blood, New York Polyclinic. Octavo volume of 700 pages, illustrated. Cloth, $3 50 net. Philadelphia: W. B. Saunders. Canadian agents, J. A. Carnech & Co., 413 Parliament street, Toronto.

SAJOUS'S ANNUAL AND ANALYTICAL CYCLOPÆDIA OF PRACTICAL MEDICINE. Subscription for entire series only. Six volumes—one every six months. Cloth, $5.00; half Russia, $6.00. Monthly supplements sent free during the three years. The F. A. Davis Company, publishers, Philadelphia.

It is impossible to review such a work as this, for the principal reason that it is a review of all the medical literature of the day. The departure is not exactly a new one, but a great advance on a very useful work, "Sajous's Annual." The articles in the first volume are from "Abdominal Injuries" to "Bright's Disease," and are most comprehensive indeed. No one need be behind in the very latest advances if he possesses this work. The connection is to be kept up by monthly supplements, which will carry all current literature to date.

Dr. Sajous—whose experience, all will admit, has been sufficient to constitute him a person qualified to judge—believes it is absolutely feasible to combine the features of a text-book and of a work like "Sajous's Annual" in one system. His idea has been submitted to many eminent medical writers, and has, in every instance, received their unqualified approval. Likewise a large number of busy, general practitioners, who not only feel the financial tax for medical works quite severely, but find that the possession of a large reference library only entails a corresponding amount of labor in using it, look upon Dr. Sajous's plan with particular favor.

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It will thus be seen that the aim of Dr. Sajous and his editorial staff is designed to accomplish two things: 1st. To give a satisfactory statement of what may be safely relied upon as the best general method of treatment in any given case. 2nd. To combine with this a means of practically utilizing the discussion by the leading medical authorities of the world, which may in any degree modify present, established methods.

The F. A. Davis Co. are maintaining their very enviable reputation in the present volume, and we know it will be maintained throughout the series.

Medical Items.

THE freedom of the city of Edinburgh will be conferred on Lord Lister on June 15th.

DR. GEORGE S. RENNIE, of Hamilton, who was seriously injured April 7th, through a runaway accident, has quite recovered.

DR. NORMAN GWYN, one of the resident physicians of Johns Hopkins Hospital, has obtained leave of absence for six months to study in Freiburg.

DRS. JOHN AMYOT AND WM. GOLDIE, of Toronto, left for Europe May 13. They expect to go first to London, and after remaining there for a time will cross to the Continent and spend some months in Paris and Vienna.

DR. T. B. FUTCHER, Associate in Medicine, Johns Hopkins Hospital, has gone to Strasburg for a period of six months' study. On his return, Oct. 1st, he will succeed Dr. Thayer as first assistant in the medical clinic of the Johns Hopkins Hospital.

CLINICAL RECORDS (20).—A hedge doctor (a quack) in Ireland was being examined at an inquest on his treatment of a patient who had died. "I gave him ipecacuanha," he said. "You might just as well have given him the aurora borealis," said the coroner. "Indade, yer honor, and that's just what I should have given him next, if he hadn't died."

A short time ago an old lady went on board Nelson's flagship, the Victory. The different objects of interest were duly shown to her, and, on reaching the spot where the great naval hero was wounded (which is marked by a raised brass plate), the officer remarked to her: "Here Nelson fell!" "And no wonder!" exclaimed the old lady; "I nearly fell there myself!"

A NEW SYSTEM OF SMOKELESS COAL FIRING.—A method of burning coal without the production of smoke was recently the subject of trial at the Grand Junction Waterworks pumping station at Hampton. The method aims at producing complete and instantaneous combustion by surrounding each particle of coal with an adequate supply of oxygen. For this purpose the coal is finely pulverized and carried into the furnace by means of the draught of the chimney. The ordinary arrange-

ments of the furnace are dispensed with, that is, the grate and firebars are removed, and in place of the door is fitted an iron plate through which passes a tube conveying air to the fire. As this current of air enters the furnace it meets a falling stream of pulverized coal and carries it into the furnace, where it is instantly consumed. The system is known as the Carl Wegener system

ONTARIO MEDICAL ASSOCIATION.—Preliminary Programme of Papers, 1898.—"Syphilitic Cirrhosis": Jas. Bell, Montreal. "Pancreatitis, from a Surgical Standpoint": J. G. Adams, Montreal. Discussion in Medicine, "Relation of Excretion to Disease": H. A. MacCallum, London; H. B. Anderson, Toronto. Discussion in Surgery, "Treatment of Fracture of the Skull": Geo. A. Peters, Toronto; Geo. S. Rennie, Hamilton. Discussion in Gynæcology, "Carcinoma of the Uterus": G. K. Holmes, Chatham; J. W. S. McCullough, Alliston; H. S. Griffin, Hamilton. "Tubercular Meningitis": R. J. Dwyer, Toronto. Alex. Primrose, Toronto. Albert A. MacDonald, Toronto. "The Injurious Effects of our Over-wrought School System on the Health of Public and High School Pupils": R. Ferguson, London. "Immunity": J. J. MacKenzie. "The Effects of the Climate of our Canadian North-west on Tubercular Patients": Peter H. Bryce, Toronto. "Endomentistes, with Erosions of the Os": G. F. W. Ross, Toronto. "The Early Removal of Tubercular or Necrotic Areas": H. H. Oldright, Toronto, "The Traumatism of Labor": C. B. Oliver, Weston. "Rheumatoid Arthritis in Children,—Exhibition of Patient": W. B. Thistle, Toronto. "When Should we Operate?" illustrated by cases and specimens: Wm. Oldright, Toronto. "My Experience with Diphtheria during the Fall of 1897": W. Doan, Harrietsville, Ont. "Hyper-resonance of the Chest—a Premonitory Symptom of Tuberculosis of the Lung": W. C. Heggie, Toronto. "The Medical and Surgical Treatment of the Insane": A. T. Hobbs, London. "Cretinism in Ontario": A. McPhedran, Toronto. "Some Details in Antiseptic Surgery": N. A. Powell. "Puerperal Complications—Cases in Practice": H. D. Livingstone, Rockwood. "Experiences with New Remedies": G. S. Ryerson. "Vicarious Urination, with Case": A. T. Rice, Woodstock. A. McKinnon, Guelph. "A Brief Sketch of the Nervous System, of its Liability to Injury and some of its Diseases": S. Byron Newman, Detroit. "The Various Operative Methods of Dealing with Eyes lost Through Injury or Disease": G. H. Burnham, Toronto. "Toxæmicæ of Pregnancy": C. J. D. Hastings, Toronto. "Hypo and Hyper-respiration in Pulmonary Tuberculosis": Edward Playter, Ottawa. "Infant Diet": W. J. Greig, Toronto. "Remarks on the Treatment of Clubfoot, based on the Personal Observation of 243 Cases": B. E. MacKenzie. Exhibition of a machine for manufacturing plaster paris bandages: H. P. Galloway.

Obituary.

Salomen Stricker, M.D.—Professor Stricker (Pathology), of the University of Vienna, died April 4th, aged 64.

Edward Cotterell, F R.C.S. Eng.—Mr. Cotterell, of London, England, died April 5th, of pneumonia, aged 41.

Llewellyn Brock, M.D.—Dr. Llewellyn Brock died at Lion's Head, Bruce County, April 22, aged 34. The cause of death was pneumonia, his illness lasting only four days. He received his medical education in Trinity Medical College, Toronto, and graduated in 1886. He was the eldest son of Dr. Brock, of Guelph. The news of his death came to many of his friends before they knew anything about his sickness, and caused profound regret.

F. R. Brown, M.D.—Dr. F. R. Brown, of Madera, California, brother of Dr. Price Brown, of Toronto, died at home April 4th, 1898, aged 61, after an illness of four days, from septicæmia due to inoculation while operating on a gangrenous patient at the county hospital. He was born in England, but at the age of eighteen came to western Canada with his parents. He lived for five years in Ontario, and then commenced the study of medicine at Ann Arbor, Mich., where he graduated in 1869. He immediately settled in California, and soon achieved signal success. The Madera *Mercury*, after referring to his illness and death, says: "By his genial manners, his uprightness and honesty, Dr. Brown endeared himself to all with whom he came in contact. He was public-spirited and enterprising, and by his death Madera has suffered an irreparable loss."

THE

CANADIAN PRACTITIONER

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PUBLISHERS :
THE PRACTITIONER PUBLISHING COMPANY,
TORONTO.

VOL. XXIII.] JUNE, 1898. [No. 6

Original Communications.

THE PRESIDENT'S ADDRESS.

Delivered before the ONTARIO MEDICAL ASSOCIATION at the Annual Meeting, held at Toronto June 2nd and 3rd, 1898.

BY WM. BRITTON, M.D. TOR.

TORONTO.

GENTLEMEN :—When, at our annual gathering last year, I was made the recipient of the highest gift at the disposal of the Ontario Medical Association, my uppermost feelings were those of surprise, thankfulness and timidity. Many there were who, by right of seniority and veteran labors, had stronger claims on your consideration, any one of whom would have presided over this noble assemblage with all the dignity and ability that the occasion demands ; therefore I the more keenly appreciate the expression of your kindly

feeling and generosity. The undertaking, on my part, was fraught with much that would naturally disturb one's ordinary peace of mind; the infancy, childhood and puberty of this association (this is but its 18th birthday) have been intimately linked with a brilliant list of eminent men who, as chief officers, have so largely contributed to its growth and effectiveness—men who have created ideals the most impressive in character, and in whose onward footprints it is not easy to tread without faltering. With a consciousness of the responsibility resting upon me and a somewhat imperfect estimate of my shortcomings, around the standard I have gathered various committees possessing all the qualifications necessary to constitute this, our annual meeting, a step forward in the march of Canadian medical science; and I would take this opportunity of expressing my thanks publicly for the preparatory work which they have so gladly, assiduously and disinterestedly performed. It has been for them no sinecure; abundant evidence of this will be found in the comprehensive programme now laid before you, the carrying out of which, I trust, will prove, in the highest sense, both entertaining and instructive.

On behalf of the association I extend to our guests from afar the right hand of cordiality and goodfellowship; and, having again and again witnessed the proverbial hospitality of that branch of the profession resident in Toronto, I have full confidence that those members who have come from the many outlying districts of the province will feel perfectly at home; indeed it will not be optional with them but rather a matter of sheer compulsion, if I know aright the instincts that prompt the gentlemen who constitute the committee of entertainment.

In order that such a meeting as this should fulfil its purpose it is imperative that each contribute his share in elucidating the various topics that may be presented. Even at the risk of verging on the sacrilegious, I would say:

> "Let not fitness make you linger
> Nor of fitness fondly dream."

Modesty should be the handmaid of true ability, not its tyrant; prominence of location is not always a reliable criterion of intense personality or mental cultivation; the city doctor, to be sure, derives benefit from frequent converse with his fellows; but his solitary brother from the cross-roads has at least one advantage over him, in that his environment, perforce, evokes the cultivation of self-reliance and the faculty of keen observation. I hope that none will hesitate; we are here for the rapid interchange of ideas that will stimulate afresh our enthusiasm and perseverance.

I scarcely think it needful to exhort the home members on this line, a very large majority of whom belong to the local societies; and, as a natural consequence, a rara avis among them would he be who required snipping of the lingual frænum. Let discussion be prompt and spirited, even approaching the line of disputation, if you will; we are assembled to elicit truth and relinquish error; and, although good-natured blows may mar the symmetry of some airy castle, its builder will not take umbrage; for, locked in the embrace of a common brotherhood, our ultimate object is not self-aggrandisement but the attainment of knowledge for the alleviation of suffering and the good of mankind.

This brings me to the subject to which, for a few minutes, I wish to direct your attention, viz., the present relationship of the profession to the public at large; and, as a pre-eminent factor thereof, the standing of the profession itself, viewed, as much as in me lies, from an impartial standpoint.

Not self-constituted as such, but in the very nature of things, he who enters upon a medical career is compelled by the peculiarities of his calling to recognize himself as a guardian of the commonweal, prompted by instincts the loftiest and motives superior to mere selfishness or ardent longings for the accumulation of wealth. The people claim, and rightly so, the devotion of his unflagging energy to the physical welfare of those to whose necessities he is called upon to minister. Not this alone, but his avocation stands upon a still higher plane than the relationship to the individual; the world at large is the scientific physician's parish, and its defects the supreme object of his best thought; never satisfied with what has already been accomplished by others, his leisure moments are occupied in striving to solve the problem of nature; often unsuccessful, but never without that reward which invariably follows the pursuit of the true and abiding. A Jenner, a Simpson, a Koch or a Lister once in a while towers aloft as some snow-capped Alp in the light of the rising sun invested with all the majesty of a noble creation. These intellectual giants few can ever hope to emulate; but, from the history of their life work, the lowliest and most obscure may draw such inspiration as glorifies labor with high ideals and fills the heart with burning desire for the good of others. Community of interest so intimately links the profession and the laity that it seems not unbefitting for me to dwell for a little on some features of human life--family, social and educational--as we see them in this Province of Ontario; and, in so doing, if I should indulge in a little criticism, do not for a moment imagine that I am posing

as the stalwart exponent of some great reformation. Much that I shall say has already been better said and written, my object being repetition for the sake of added testimony and emphasis.

During the past two or three generations there has been in progress, amongst our people, a certain kind of questionable evolution—intellectual development somewhat out of proportion to physical force and endurance. Our grandparents were a hardy stock, well furnished physically for coping with life's difficulties. In those early days of migration from the old lands Canada was to them a far-off, unknown country, clad in its primeval forests; and, to reach its shores, they had to undertake an ocean voyage in sailing vessels often badly equipped for the stormy journey. The weak and puny dared not venture; consequently, by natural selection, Ontario was peopled with a sturdy race of pioneers blessed with great physiques, living in a primitive, natural fashion, and free from the burden of too much scholastic training. *Pari passu* with the financial advancement of the country, a gradual change has been going on in these respects; let us inquire if it is for the better.

Herbert Spencer never said a truer word than when he affirmed that "first attention should be devoted to the development of the body, and that profound erudition should be looked upon, in some senses, as of secondary importance." True education can be nothing more nor less than that which prepares mentally and physically for the oncoming struggle. It is fortunate for the race that young men naturally choose for their helpmates rollicking, buxom damsels in preference to the sunken-eyed, sallow-faced slaves of knowledge. I do not for a moment seek to enter a protest against the higher education of woman; mental culture is, for her, a diadem of beauty; but too often a possession acquired at tremendous cost. None but the strongest should, in my opinion, enter on a career of study so exhaustive and exacting as the curricula of our universities set down. A head full of knowledge and a worn-out nervous system are but poor qualifications for the coming mothers of Canada's sons. We as a people are proud of our Ontario school system; that it is largely taken as a model by the Provinces of Quebec, Manitoba and British Columbia and the Northwest Territories, and has been highly commended by the foremost educationists of the United States, among them the Commissioner of Education at Washington, is a tribute to the wisdom and foresight of those who have placed able administrators at the head of this department of public affairs; but, like all things of human origin, we must not look for perfection in its details. From the physician's standpoint I humbly submit

that it is handicapped with a defect of such magnitude as to alarm him who weighs well the possibilities of the future. The standards of to-day reach so far above those of a couple of generations back that evolution along the line appears to have advanced at a galloping rate. Is it not time to tighten the reins? Are not children sent to school at far too early an age to stand the fatigue of book-work? The first seven or eight years of life should be free from care and worry and devoted exclusively to such pleasurable pursuits as shall conduce, in the highest degree, to the development of bone and muscle; for, during this period, the nervous system will have plenty to do in automatic preparation of itself for the subsequent performance of its special duties. Parents and teachers leap for joy when a five-year-old manifests his precociousness; and the nervous little monster is held up by his attenuated arms in the sight of his phlegmatic or sanguine classmates as a paragon of perfection angelic to behold, when he should be making mud pies and wearing out his pantaloons in the physical activities of childhood.

Unless the vision be tested too much with small objects, no one can take exception to the work of the kindergarten; for its essence is agreeable discipline, the training of the faculty of observation and the directing of memory in preparatory channels without forcing its exercise; in a word it is child's play made systematic.

In the ordinary schools, homework, as a rule, is made a burden too heavy to be borne with safety—when the pupil has finished the task there remains insufficient time for rest and recreation, and it is no unusual thing to find the problems of the evening in advance of what already has been thoroughly taught. It would appear at times as though the schoolroom were transformed into a hall of inquisition for the purpose of discovering how much the pupil has failed in his home study, instead of being the place for intelligent education in harmony with the order of development of the mental faculties.

It is to be hoped that, ere long, in the advanced classes of the collegiate institutes as well as in our universities, competitive examinations will cease to be so stiff that victorious combatants emerge from the conflict proud of their conquests; but, as likely as not, to fall into the hands of the doctor for repairs—sometimes too late—for often the foundation has already been laid for a neurasthenic superstructure. I am not speaking theoretically; but am setting forth those things with which, professionally, I have had to deal.

Let us propound to ourselves the question—why is insanity, especially that of adolescence, together with kindred forms of nervous disorders, on the increase? And, having, solved it to our satisfaction, let us give the community the benefit of the investigation. The emulation and everlasting strife for a place in the front ranks of society, financially and socially, constitute doubtless a potent factor; but let us not forget that this restless activity is often born of the habits engendered long prior to manhood.

Functional excess is always at the expense of defective reparative power. An extraordinary organ is the brain—a tired muscle refuses to work, an over-wrought mind declines to take repose—the ploughman, after having "homeward plodded his weary way," sinks into sweetest slumber, while the over-taxed student is, too often, the victim of insomnia with all its hideous reveries.

Someone has well said that the bulwarks of a nation consist not in strong fortresses erected on its boundaries, nor does its stability depend upon mighty navies that traverse every sea; but its security lies in the keeping of intelligent men and women who have sound and rugged bodies ever ready to repel the inroads of disease.

It is a matter for congratulatory reference that Governmental assistance, municipal aid and private contributions, prompted by appeals from the profession and under its guidance, have dotted the land with hospitals for the reception of the poor and needy, as well as for the convenience of the opulent, and that these institutions are accomplishing a great work in the interests of all classes; but it is to be deplored that, under the guise of poverty, daily abuse is made of the privileges that philanthropic motives have provided for the deserving poor.

Here the attending physicians discharge responsible and onerous duties without hope or expectation of reward, other than that which might be expressed in Portia's words paraphrased—"Charity is twice blessed: it blesses him who gives and him who receives"; but gratuitous services to those who are quite able to remunerate are not a blessing but a pauperizing curse to the recipients.

It is stated by no less an authority than the *Medical Record* that the number of persons who received free medical and surgical relief at the hospitals and dispensaries of New York during the past year amounted to 49.7 per cent. of the entire population, and that fully 70 per cent. of this number were quite able to pay a medical practitioner at least a moderate sum for his services; and no member of a hospital staff in Ontario will deny the fact that the evil exists here.

How this difficulty is to be met it is hard to determine; but some effectual check should be placed on a custom so fraudulent in character. As a rule, before admittance is granted to a free ward, a certificate is required from a clergyman or other reliable citizen to the effect that the case is one deserving charitable consideration; and, it seems to me that, were such a law extended so as to include those seeking out-door advice or attendance, the evil would be much mitigated. It is, of course, understood that exceptions would be made in cases of emergency and amongst those who are utter strangers in the municipality. I would suggest that a representative committee be appointed whose duty would be to make full inquiry as to the best method of miminizing these impositions and with instructions to report to this association at its next annual meeting.

My immediate predecessor denounced in forceful language the universal existence of lodge attendance; I can only emphasize the remarks that fell from his lips. To contract work, on the ground of principle, none could fairly take serious exception, provided always that the contract price is fully commensurate with the value of the work done; but to bring about such a condition of things will be accomplished only when the dignity of the profession rises superior to that which is accounted merely expedient; for, so long as medical men are willing to accept the beggarly pittance of one hundred and fifty dollars a year or less for looking after the health of a hundred members of some lodge or other, with the hope of securing thereby professional entree into their family circles, just so long will this financial snap prove to be one of the strongest drawing cards in the hands of fraternal societies.

I do not feel free to denounce the individual transgressor to the lowest depths—the custom is everywhere; and often, contrary to his nature, for self-protection he is forced into this objectionable line of work. Still, after all, it is at best the same old lame excuse: "If I don't do it, others will." With all my heart and soul I stigmatize the system as a rotten plank in the platform of gentlemanly dignity and independence.

We have, in this country of ours, an array of medical men and a galaxy of schools of medicine and surgery that would be a credit to any land under the sun. For all that, one is forced to lament the fact that, in a certain sense, their light may be hidden under a bushel. I refer particularly to the non-production of home-made medical literature. Thirty or forty years ago our special knowledge was derived from the writings of men in the mother land;

since that time our cousins across the line have been forging ahead so rapidly that, to-day, in any medical library are to be found almost as many volumes of their production as those that come across the Atlantic; and, amongst the best of these, are those whose authors were formerly Canadian citizens, but who, in search after larger spheres of activity, have gone over to the Republic.

We have a few noted exceptions—workers who have had the courage to venture out on this field of labor—and their writings have met with much favor and appreciation. There are many others who have been richly endowed by nature, and possess the knowledge requisite for the purpose, but a single obstacle in the way—lack of self-confidence—has hitherto deterred them. Personally, I hope to see the day when our students will have in their hands first-class books, emanating from those of the profession in Canada who have the genius of imparting their thoughts in a form alike striking and attractive.

Should this company formally express its convictions as a stimulus I cannot believe that I am allured by an ignis fatuus when I predict that ere we meet again in happy conclave we shall see further evidence that the hardy sons of the North are determined that our country shall stand side by side with those that have given to the world medical works worthy of closest perusal, accepted as standards and a credit to the authors.

A few years ago, for reasons best known to themselves, the members of the Ontario Cabinet indirectly assumed the responsibility of annulling that clause of the Medical Act which made provision for the framing of a tariff in each electoral district; such scale of charges to be authoritative after endorsation by the Council of the College of Physicians and Surgeons.

I was given to understand at the time that Sir Oliver Mowat expressed the opinion that the system was objectionable owing to the lack of uniformity amongst these various tariffs, emanating, as they did, from as many council constituencies. In my humble opinion, on close investigation, this could not be held as a valid reason. The urban and pioneer settlements of the province are vastly different so far as the financial resources of the people are concerned; a uniform tariff would either press too heavily on some or be inadequate for the circumstances of others, and, therefore, could not be as fair as those which were in existence.

We all know that during that session of the House there was not a little influence exerted by a certain clique or section of the Legislature, which promulgated the doctrines of extreme radicalism, and

was largely founded on the principles of iconoclasm. A prominent feature of its policy was obnoxious opposition to all kinds of class legislation, and the doctor was labeled a parasite in the community. Zeal, not born of knowledge, used all available means to secure destruction of the tariff. How much their efforts conduced to the ultimate result I do not know, but speedily the tariff became a thing of the past, and, as a consequence, the judges of the land are left without any recognized guide in estimating the value of services rendered, for which compensation might be sought in the courts.

A petition to the Government, asking for redress of this grievance and directing attention to other matters of moment was circulated last year amongst the profession by order of the Medical Council. It obtained nearly two thousand signatures and was presented in due form, but the understanding given to the Committee of Legislation was that the complexion of the house was such as to render, for the present, any amendment to the Medical Act inexpedient.

I have always been, and am to-day, a consistent supporter of our administration; therefore, it will, I trust, be conceded that I speak from an unprejudiced standpoint; but I must say that we, as a profession, cannot afford to be deprived of that which was our honestly acquired possession, a privilege the abuse of which has rarely been assailed and never proven. Let this association not forget that it wields a tremendous influence politically. I appeal to its members, as well as to those of the profession who have not yet entered its ranks, to account it their individual and combined duty to lay before their representatives in Parliament the exact facts of the case in order to have a speedy restoration of their rights.

One word more on the much-discussed question of inter-provincial registration and I am done; and, in so doing, if I introduce aphorisms afflicted with talipes, give credit at least for the effort, because Mark Twain says: "It is easier to be good than to make a maxim."

(1) Our existing system is egregious, and the natural outcome of that part of the Act of Confederation which placed the control of education in the hands of the prov nces.

(2) Vast fields in the great Northwest are being rapidly deve oped, and require medical federation.

(3) In the older provinces it would relieve plethora.

(4) Recent licentiates, most of all, would appreciate its broadness.

(5) On careful examination I find our standard the highest, both

as to preliminary training and the prescribed course of scientific study.

(6) To await theirs to equal ours would postpone indefinitely.

(7) Reasonable concessions are neither undignified nor disastrous.

(8) Our co-workers could strive to meet us part way.

(9) Mutual sentiments, then matrimony.

(10) Unswerving loyalty to the genius of our calling and abiding confidence in Canada's future must, before long, remove every barrier, fancied or real, that stands in the way of its happy consummation.

(11) A great empire, its greatest colony, one language, and a united profession.

In conclusion let me again express my thanks and wish you all abundant prosperity, during the coming years, in your various centres of usefulness.

ASYLUM VERSUS HOSPITAL.*

By Dr. James Russell,

Medical Superintendent of the Asylum for the Insane, at Hamilton, Ontario, Canada.

As we ring out the closing years of the 19th century, laden with accumulated treasures of knowledge and experience, in every department of human activity, we naturally become retrospective of the past and prophetic of the future.

This vast inheritance bequeathed entails upon us the tremendous responsibility of passing it on to posterity, not only unimpaired in value, but magnified and enriched by our own contributions as faithful stewards of our own day and generation.

As the vanishing shadows of the old century lengthen into oblivion, already we see in the distance the glimmering dawn of a new century, heavily freighted with stupendous opportunities and possibilities for the future. The century now drawing to a close has given such a gigantic impetus to every branch of scientific, commercial and industrial thought, that we stand appalled and confounded at the very richness and magnificence of our heritage. Two great forces have been in operation, the one destructive of the old, and the other constructive of the new. Step by step, in rapid succession, old theories, customs and superstitions, the offspring of ages of ignorance and credulity, lie prostrate in the grave in the presence of the electric blaze of scientific enquiry and demonstrated truth. No branch of human research has been crowned with richer results, or rewarded with greater advance, than in the departments of medical, surgical and mental science.

The purpose of this paper is to take a rapid review, historically, of the evolution of the asylum and its sister charity, the hospital, to point out the uses and abuses of each in the past, the distinctive function of each at the present, the lessons to be drawn from past experience, and the lines upon which we shall proceed in the future.

The early history of the asylum is meagre and involved in much obscurity. We have sufficient knowledge of its history, however, to

* Read before the American Medico-Psychological Association at St. Louis, May 10th, 1898.

show that its early function was entirely different from its present use. The etymology of the word, coming from both Latin and Greek sources, signifies that it was a sanctuary or place of shelter, an institution of the church, where criminals and debtors sought refuge from justice, and from which they could not be taken without sacrilege. The ancient Grecian temples had this right, and the custom, following Jewish analogy, passed into the Christian Church. From the time of Constantine downwards, certain churches in many Catholic countries were set apart as asylums for the protection of fugitives from the hands of justice. In England, down to the Reformation, any person taking refuge in such a sanctuary was secured against punishment (except when charged with treason or sacrilege) if within the space of forty-eight days he gave signs of repentance and subjected himself to banishment. By the Act 21, James I., cap. 28, the privilege of sanctuary for crime was finally abolished. Various sanctuaries for debtors, however, continued to exist in and about London till 1697, when they too were abolished. In Scotland, the abbey of Holyrood House and its precincts still retain the privilege of giving asylum to debtors, and one who retires thither is protected for twenty-four hours, but to enjoy protection longer the person must sign his name in the books kept by the bailie of the abbey; since the abolition of imprisonment for debt this sanctuary is no longer used.

The right of asylum is still used as a term in international law, whereby persons committing certain crimes in one country may take refuge in another.

During all this time, while the Church and the State provided the right of asylum for criminals and debtors, no special provision was made for the care and treatment of the insane. They were confined in gaols, penitentiaries, hospitals and workhouses, and generally in filthy and wretched apartments. The only idea of treatment was that of forcible restraint, tied with chains to the wall and caged behind iron bars, with only a litter of straw to sleep on, like wild beasts; they were lashed with the whip into submission, and confined in cold and damp apartments; they soon pined away and died, and over the lintel of each door might be written the words: "Abandon hope all ye who enter here."

It was not until the middle of the last century that the first institution was erected at St. Luke's in London, whose avowed purpose was the cure of insanity. This was followed by the erection of the York Retreat by Tuke in 1792, who was the pioneer in introducing the treatment by non-restraint. Contemporaneous with Tuke,

Penel, in Paris, was braving public opinion in removing the chains and fetters from the insane at the Bicetre in 1791, and at the Salt-petriere in 1794. In America, Rush and others had imbibed the spirit of reform, and the good work went on, so that we might say the dawn of the present century witnessed the first attempt to treat the insane on rational and humane principles.

The early history of the hospital is quite as meagre and obscure as that of the asylum. The word hospital comes to us from the Latin words *hospes* and *hospitalis*, of or relating to a host or guest. From the mediæval Latin we get *hospitale*, a large house or palace, an inn. The same word, contracted, appears in old English as hostel, and in modern English as hostelry and hotel. In ancient Greece the sanctuaries of Æsculapius included establishments akin to mediæval and modern hospitals. A Roman lady named Fabriola, in the fourth century founded at Rome, as an act of penance, the first public hospital, and the charity planted by that woman overspread the earth.

At the beginning of the present century both asylum and hospital stood on about the same plane in regard to public favor, and both were utterly shunned and detested except in cases of great emergency, and then only by the indigent and friendless. The asylum was a madhouse indeed; the inmates were treated like wild animals, and were simply held in custody as a protection to the public. The hospital was also a synonym for the most barbarous treatment, and the public regarded it not as a place for curing disease but a place for experimentation by the doctors, and admission to one was regarded as a prelude to sure and certain death. The laws of sanitation, anæsthesia and antisepsis were still unknown, and the nursing was of the rudest and crudest character. The process of evolution from this condition to the present is simply marvellous, and is entirely due to the splendid achievements of medical and surgical science. The popular prejudice against hospitals, except in isolated cases, has entirely broken down, and people of all ranks and classes when afflicted with bodily disease now feel that the hospital furnishes not only the best medical and surgical skill, but the best nursing and equipment for the amelioration of their condition and hope of recovery.

I now purpose to draw a parallel between the asylum and hospital of to-day to see how we compare in scientific attainment and in popular estimation. I fear there still lingers a prejudice against the asylum which we have not quite overcome, but which the hospital is now almost entirely free from. When we consider the tre-

mendous legacy of prejudice which we have to contend against this is not to be wondered at. It is still a mark of social disgrace to have been in an asylum, and even when recovery takes place the person has to suffer from popular prejudice, which severely handicaps him or her in the race of life. The friends, recognizing the force of this, resort to all sorts of secret devices to hide the unfortunates away in some distant asylum if they can afford it, and all sorts of trumped-up stories are invented to account for their absence. Novelists still cater to the public craving for sensationalism by rehearsing demoniacal scenes of a bygone age in asylums. The public journals still teem with sensational reports of alleged cruelties, which are either untrue or greatly exaggerated.

The work in an asylum is so essentially different from the hospital that we are necessarily more subject to public criticism. The conditions attending the healing of the mind are wholly different from the healing of the body. In the asylum we have to deal with irresponsible beings in all stages of mental alienation. The very discipline which we enforce, no matter how salutary and curative in results, is often mistaken for cruelty, and with that shrewdness and cunning peculiar to the insane, they are not slow to tell horrible tales of neglect and cruelty, which credulous and over-indulgent friends are too apt to believe. Happily this condition of things is rapidly passing away, and the heavy demands made by the public for asylum accommodation is the best evidence of its growing popularity. The asylum of to-day is not only an expression of the accumulated wisdom of the past, but an exemplification of the highest scientific attainment in mental science at the present. It also typifies in a remarkable degree the rapid evolution of thought, which spans a century of time, and stands a monument of the wisdom, generosity and beneficence of our advanced Christian civilization.

In recent years a movement has arisen in a section of America to eliminate the word asylum from the vocabulary of our specialty and substitute for it the word hospital. We are told that the word asylum may have properly symbolized the function of those institutions in the past, when ignorance, superstition and cruelty held sway, but under modern scientific methods the word asylum is a misnomer, and should be discarded.

It is held that an opprobrium attaches to the word as typifying the inhuman and unscientific treatment of an ignorant and barbarous age. It is said the old treatment by mechanical restraint, whereby refractory lunatics were chained, strapped, jacketed and muffed by

day, and confined in cribbed beds by night, has been consigned to the limbo of the past, and that the modern hospital idea is now the dominant principle of treatment.

I yield to no one in my desire to adopt the most advanced methods in the treatment of the insane, but I hesitate at confessing inferiority and of becoming an apostate as a means to the accomplishment of the end. Is it necessary to renounce our ancestral name, even with all its original and actual sin, but now, hallowed and enriched by the light of modern science, and accept baptismal regeneration and adoption into an alien family, of whose rich domain we are not the lawful inheritors?

If the torchlight of science has burned with greater brilliancy within the hospital than within the asylum, whose fault is it? Is it not a confession of weakness to commit an act of grand larceny by assuming a name which we have not earned, and thus take a short cut to popular favor? There is nothing to be gained by masquerading in borrowed plumage, unless we can prove that we belong to the same species and have the same family instincts and habits, and are designed to do exactly the same kind of work. I take no stock in that scientific sentimentalism which seeks to popularize itself with a name—words are but symbols of ideas, and unless a name has behind it the merit of good works to commend it to popular favor it will be but a tinkling cymbal and term of reproach.

Why should we proclaim the hospital to be the apotheosis of all the scientific virtues, and brand the asylum with the trade mark of inferiority? Why should we pay such court and deference to a sister institution, and confess our weakness and inability to compete with it in the race for popular favor? Why should we humble ourselves in the dust and admit that we have not sufficient individuality and inherent strength of purpose to rise above the popular prejudices which surround a name? Is it not rather our duty to proclaim to the world (as we are doing) by our deeds that the cruelties and barbarities of a less enlightened age are long ago abolished, and that, purged and purified, we stand forth as the embodiment of the richest and noblest experience of Christian teaching and modern scientific thought? As specialists in mental science, our work is clear, we have accomplished great things in the past, but there is still work for us to do. Let us address ourselves to it in a spirit of self-confidence, that we shall not relax our efforts, but press on from one vantage ground to another, until the beauty and excellence of our work shall have so permeated the masses that old prejudices shall melt away under the noonday sun of enlightened scientific

methods, and the sweetening influence of Christian benevolence and charity.

In the published transactions of this association last year, I note that ninety-three hospitals for the insane are reported, and forty-eight asylums for the insane; thus showing that more than one-third of the institutions affiliated with this association are still unleavened with the new designation.

Throughout other parts of the world, where similar institutions exist, I know of no movement having for its object a change of designation from the ancient landmark of asylum, to that of hospital. It is unfortunate that there should be want of uniformity in designation, as it must inevitably lead to more or less confusion and embarrassment, both in speaking and writing, in regard to these institutions.

I purpose now to show that the word hospital, in its modern application, is a misnomer, when applied to an institution for the insane, and that the future evolution of the asylum must be on educational and industrial lines instead of hospital methods. How to lessen the ever-increasing residue of chronic insane, which flows in upon us like a mountain torrent, is the great problem which confronts us to-day. With all our boasted scientific attainments and hospital methods, we stand helpless in the presence of this colossal army of mental cripples, who have failed to adjust themselves to the environment of ordinary citizenship and, unable to provide for themselves, they become outcasts from society, and are brought to us seeking the right of asylum. What do we do for them? We simply feed and clothe them and provide as many of the comforts of life as the generosity of our respective legislatures will permit, and thus they drag out their weary hopeless years, until the great Reaper arrives to call them hence.

To further prove that the hospital idea is not the dominant principle of treating the insane, I submit a census and classification of the Hamilton Asylum which I represent. I think it may be taken as fairly representing the average asylum on this continent.

It is situated at the head of Lake Ontario, on the Niagara peninsula, and in the midst of the very garden of the province. The asylum district, from which we draw our patients, is a mixed urban and rural community, and the educational facilities are of the highest order. The population of the asylum is 1,000, and the population of the district is divided as follows:

Population of cities and towns—175,000 or 36 per cent.
" " rural sections—312,000 or 64 " "

The population is largely of British origin with the exception of one county, which is German. The foreign population from all other countries is very small. The classification is made according to present condition and future prospects as follows :

Asylum population	1,000.
Number of cases requiring hospital treatment proper	50 or 5%.
Number classed as physically healthy, but not requiring special hospital treatment and possibly curable	200 or 20%.
Number classed as probably incurable	750 or 75%.

With this classification in view, we erected an isolated hospital with a capacity for 50 beds, which we never expect to fill, unless an epidemic overtakes us. The other 95 per cent. are not treated by hospital methods in the ordinary acceptance of the term; the whole treatment is of a general and routine character, and may be included under two heads, moral and disciplinary.

In visiting asylums one is struck with the general similarity of them all in regard to equipment, methods and treatment. The most striking characteristic in them all is the large number who spend their time in absolute idleness.

In all our large asylums, there is a perfect Niagara of mental and physical force going to waste, and how to utilize this force, from an economical and psychological standpoint, is the great and burning question which confronts us to-day. (1) How shall we utilize this force in contributing to the self-support of our institutions, and thus ease the burden on the State ? and (2) how shall we direct this force to rekindle or control exhausted and disordered brain function ? Insanity may be classified under two general heads : viz., maniacal excitement and melancholic stupor, with many subdivisions to meet varieties of type. The first class may be compared to a machine without a balance wheel or like a ship without a rudder, tossed on the angry waves of uncontrolled imagination ; the second class is that of morbid introspection, like the voice of one crying in the wilderness of despair, or the helpless wail of the Macedonian cry, "come over and help us." In each case there is a disturbance of the higher psychical or associative centres, which regulate and control these mental processes, and this disturbance may be due to physical disease of the cellular elements of those centres, to defective nutrition, or to enfeebled function from lack of exercise.

No psychological fact is more strongly demonstrated than that we are moulded and fashioned morally and intellectually by our

social environment, and that our mental development is weak and rudimentary, or powerful and complex, in direct ratio to the mental stimuli which we receive from our external surroundings ; in fact the human race of to-day is but the expressed sum of human experience from the beginning, crystallized into form, custom and law.

I do not propose to enter into a metaphysical discussion of the origin and existence of psychical phenomena as to whether it is a cosmic entity which pervades the universe, and of Divine origin, and which manifests itself in us through the operation of our senses, or whether it is merely the outcome of molecular activity and the co-relation of forces operating from without on the cellular matter of brain tissue within ; it is sufficient for us to know that mind manifests itself and expresses itself to the world in direct ratio to the environment and stimuli it receives from without. This is the foundation upon which all psychological science must rest, and on this foundation must its twin sister psychiatry build. If this hypothesis be correct, and I am sure each one can verify it by experience, then we have a clue to the whole psychical process of mind healing, mind building, and mind expansion. This brings me to the practical application of this theoretical teaching in the every day experience of our specialty. Mental and physical activity is the key-note we must strike ; there must be no drones in the asylum hive, the brightest mind and the most powerful physique will wither and die for want of exercise; along every afferent nerve fibre there must be a continuous current of force to the nerve cell within, which, acting as a reservoir, again discharges itself by different pathways, resulting in muscular activity or a psychic process. The exhausted brain batteries of the melancholic must be recharged with the electric current of thought, the over-charged batteries of the maniacal must be chained or harnessed to some mental or physical process by which it may expend its force along physiological lines, and when exhausted and subdued it may rebuild and fashion itself by improved methods of mind building. A new factor, auto-intoxication in the etiology of insanity, has been advanced lately, and many plausible theories and clever articles have been written in support of this theory. We have abundant evidence of auto-intoxication as a causative agent in the degenerating effects of syphilis and alcohol on nerve tissue. The causative relation of auto-intoxication to maniacal conditions has not yet been demonstrated. The auto-intoxication may be only the symptom of a cause. It is well-known that the nervous system presides over the whole process of

secretion, metabolism and excretion, and defective nervous innervation may so arrest the chemico-vital process of metabolism, as to leave the vascular system charged with deleterious matter which would under normal conditions have been excreted. Be that as it may the primary indication is to restore nervous function on physiological lines and thus restore the normal equilibrium between nervous innervation and chemico-vital metabolism. Unfortunately many cases have passed into a condition of pathological degeneration before they reach us and from which no human skill can rescue them; many other cases that are still within the pale of physiological possibility pass on from one stage to another until they reach the terminal stage of chronic dementia from sheer mental and physical inertia. It is often a difficult question to determine when the physiological process ends and the pathological process begins.

Take an illustration : C. P., aged 46. Admitted to the Hamilton Asylum on April 10th, 1889, in a condition of melancholic stupor; history, an intelligent well-to-do farmer, married, and the father of nine children, attack had been gradual, with no apparent cause, refused to talk or undress himself or take food, was uncleanly in habits, stood in a dazed condition and refused to lie down unless compelled by force; at the end of the first year, continued in very much the same condition, walked continuously up and down the corridor and would not sit down except at meals ; when taken outdoors he had a beaten path that he trod back and forward, his feet and legs were swollen from constant standing and walking, and had to be put to bed for several weeks at a time to overcome the œdema in feet and legs ; still refused to speak to anyone, even to his wife and children when visiting him. He ate sparingly, would not eat butcher meat for years. Was put to bed and the rest treatment enforced with liberal regimen, which improved him physically but without improvement mentally. As years went on he became more tidy in his habits, would wash his face and comb his hair and make his own bed, but still refused to speak and took no interest in his surroundings, was a great reader in normal condition, but now never looks at a book or newspaper. In April, 1895, was subjected to the thyroid treatment as affording the last ray of hope with absolutely negative results. He was now regarded as a chronic dement and all hope of recovery abandoned. On the first of November last, the night attendant reported that he overheard a conversation between him and a fellow-patient in the dormitory after they retired to bed; he was told to listen the following night,

and again reported for several consecutive nights the same conversation.

He then began to talk to the attendants and it was like the voice of one risen from the dead ; he gradually resumed his normal habits and became bright and cheerful, and expressed a desire to see his family. On the eleventh of last March he went home on probation, each report from home was more assuring than the other of his rapid improvement, and on the twelfth of April last he was discharged recovered.

Here is a man, who for eight years, six months, and twenty days had been as dumb as an oyster, and to whom, during that time, the world was an apparent blank ; suddenly the cloud begins to rise, the mist is dispelled, mental consciousness returns, ideas dawn upon him and multiply, his speech centre is energized, a new motor current goes forth which unloosens his tongue and he gives expression to his ideas like a resurrected spirit from the dismal tomb ; he returns to the bosom of his family and again resumes his citizenship.

Who can explain the *modus operandi* of this mysterious psychological process? Here is a case that teaches us the necessity of never abandoning the most hopeless case. Everything that mental science could suggest was tried in vain and yet under the ordinary moral and disciplinary rules of the asylum he eventually made an excellent recovery.

It further teaches us that we may trust too much to scientific methods in our psychiatry, and neglect the common things that lie within our reach, we may choose the weak things of the world to confound the things that are mighty.

This brings me to the practical application of the theories I have advanced, that the evolution of the twentieth century asylum must be on educational and industrial lines. The success which has attended the education and development of the idiot and feeble-minded should encourage us to go forward ; we must descend from the dizzy heights of modern scientific affectation and get back to first principles of mind building. A great field of operation in this direction is waiting to be exploited, the fringe of which we have only yet touched. The mental process of attention, conception, judgment, and imagination must be aroused, concentrated, and developed by faithful, persevering and methodic labor. The asylum of the twentieth century shall have its school-rooms, art-rooms, work-shops and gymnasium, with a curriculum of study in each, graded to suit the varied requirements of mental enfeeblement.

The death-knell of drowsy indolence must be rung, and the gospel of mental and physical activity must be proclaimed. Mental and physical inertia means loss of function, degeneration and death ; well-regulated activity means development of function, power, and life.

The twenty-four hours of each day must be divided under three heads, viz.: labor, recreation, and rest. A daily programme of orders must be issued, under which each patient must be classified, and every minute of time must be accounted for with the utmost precision and regularity. The programme must be of such a varied and diversified character as to awaken as many of the dormant faculties as possible, with a view to restore and harmonize the mental equipoise. Blind, haphazard, unreasoning routine must be abolished, and each individual case must be studied and treated according to an intelligent plan.

It may be urged that the equipment required to conduct our asylums on this plan will so increase the cost of maintenance that public opinion will not sustain it. I deny this assumption. Have we not reasonable assurance to believe that with an equipment conducted on this plan the ratio of recoveries would increase at least from 5 to 10 per cent., which in itself would relieve an ever increasing burden upon the State, and thus prove to be a profitable investment from an economical standpoint? Looking at it from a higher and more humane standpoint, if we can rescue a larger percentage of our fellow-mortals from the awful doom of perpetual mental bondage, then would the increased expenditure be more than justified. Once arouse public opinion to the possibility of such an achievement, then the genius and spirit of the 20th century will rise to the majesty of the occasion, and that grand humanistic spirit of altruism, which is the glory and honor of our modern civilization, will declare that it shall be done. On us as stewards of our specialty lies the responsibility. Every step in advance must come from within. We have accomplished much in the past. There is a wide field before us yet waiting to be explored. We have a double responsibility (1) in preventing and (2) in curing insanity. The public are either ignorant of or ignore the fundamental laws which govern the procreation of the human race. They are keenly alive to the law of methodical selection in breeding a fast horse or a beautiful dog, but quite indifferent to the same law in breeding an improved type of men and women. Hereditary transmission of mental and bodily defects haunts us with a persistance only equalled by its universality.

In order to adjust ourselves harmoniously to our whole environment we must be born right, then the task of living right becomes easy. It requires the most rigid discipline, crucifixion and scourging for some to live even an outwardly decent life; they are tossed on the angry waves of inherited tendencies and passions, which make life to them one long continued tragedy. To others, life is like the music of the Aeolian harp, which sweetly mingles all the harmonies of sound; they sail down the placid stream of life because the ship is well-rigged, well-ballasted, and well-crewed.

As alienists and specialists in mental science we have a duty to perform to the public in teaching them how to live in conformity with natural law and how to avoid the many pit-falls which beset them on every hand and which drag them down to mental and physical degeneration.

Our asylums should be an epitome of how to live in harmony with natural law, and should exemplify both by teaching and practice how to attain the highest type of mental and physical perfection. Its whole equipment must have this end in view, and should be of such a varied character as to draw out, develop, and harmonize weak and disordered functions, and thus enable it to adjust itself to natural environment. We must provide such a rich dietary of mental and physical pabulum as shall strengthen and enrich the whole economy of life, and enforce such a discipline as shall regulate and control the weak and discordant habits which have been running riot in prodigal excess; we must classify, systematize, and individualize upon a well-regulated plan of treatment, so that each mind shall be watered and fructified by continual showers of refreshing growth and development.

The dawn of a new century is a propitious time for the advent of a new psychiatry, not based on hospital ideas, which should be only part of a harmonious whole, but exploiting a newer and richer field of psychic stimulation on educational and industrial lines. We must get out of the dull and stupid routine of the past, and with our minds ablaze with a throbbing inspiration, reach out to a higher plane of success in the future.

We must be students and teachers in experimental psychology and not mere empiricists in mental science. When we review the whole field of human activity, and witness the mighty strides which have been made in every branch of science, it becomes us to examine ourselves to see whether or not we are abreast of the age in everything which pertains to our specialty, or whether in the indulgence of a spirit of indifference and self-security we may have lagged behind in the race.

The time has come for us to review the etiological factors which predispose to mental enfeeblement, as well as to mental development; both the profession and laity have long subscribed blindly to the shibboleth of *mens sana in corpore sano.* We have been taught to believe that the differential equation of mind can only be solved in terms of a physical integrity of brain tissue, and that mind expresses itself in direct ratio to physiological or pathological conditions.

We have abundant clinical experience that all mental alienation cannot be included in this general formula. Take the large class of paranoiacs who throng our asylums, and who enjoy perfect physical health and live to old age; it cannot be said of them, that their systematized delusions are the result of pathological conditions; the whole process of mental and bodily nutrition is conducted perfectly along physiological lines, and neither macroscopically nor microscopically can the slightest evidence be found of cellular degeneration. We are driven then to the conclusion that this condition must be due to congenital, anatomical malformation, or to a faulty morphogenesis of the brain cell, either hereditary, or acquired from unhealthy environment.

The world is teeming full of paranoiacs everywhere, and it is only the exaggerated forms which reach the asylum. It is held by a certain school of psychologists that the presence of a delusion is in every case the evidence of a degenerative process, and the megalomania of general paresis is pointed to as proof, but they forget that in paresis the degeneration is rapidly progressive and limited to a period of a few years and is due to a specific cause, whereas, in the paranoiac it is compatible with the most perfect physical health, and the patient usually dies of old age or some intercurrent disease.

All sorts of theories have been advanced to explain the psychic process of a delusion, but none has received general acceptance. The mistake has been made in assuming that every delusion is the result of a pathological entity, and that the psychical mechanism is the same in every case.

The paranoiac reasons from his premises with the greatest logic, and to attempt to reason with him only maddens him and intensifies his delusion. There may be a defect in the higher centres of quality but certainly none of quantity, for he enforces his ideas with all the candor and vehemence of the most enthusiastic devotee.

In recent years the law of associative nerve centres has been generally accepted to explain the phenomena of mental manifesta-

tion, but clinical observation proves the existence of a higher presiding executive centre of judgment, which examines the quality of every external stimulus, and, after weighing, measuring, and balancing, executes and determines the whole phenomena of mind. It is not the quantity, but the quality, of this power which distinguishes us from one another, and which enables us to express ourselves, normally or abnormally, to our environment and stamps us with success or non-success, in every relation of life.

To sum up, I have attempted to prove that too much attention has been paid to the physical treatment of insanity, and too little to the mental. The hospital idea is the outcome of this tendency. We attempt too much by medication and surgery and too little by mental stimuli, forgetting that the reaction of the mental on the physical is quite as potent as its converse.

The hospital is an important adjunct to every asylum, but it is only like an outpost on the frontier of the great unexplored region beyond. To the great mass of the insane hospital treatment proper is useless, except in individual cases, or as emergency may require. The rage for physical athletics is an evidence of the tendency of the age, and we may produce a race of physical giants, who are only mental pigmies. The necessity for mental athletics is equally necessary to maintain an all-round development, and how to harmonize them both in proper proportions is the fundamental basis of all treatment of the insane.

CLINICAL REPORT OF CASES ILLUSTRATING SUCCESSFUL OPERATIONS UNDER ADVERSE CONDITIONS.

By A. Primrose, M.B, C.M. Edin., M.R.C.S. Eng.

Surgeon to St. Michael's Hospital and the Hospital for Sick Children, etc.

THE following cases seem worth reporting because they illustrate that successful results may occasionally be obtained, although the patient may be suffering from some grave constitutional trouble which would make operation unjustifiable were it simply one of expediency. The first two cases come under this head, whilst the third case is the record of the operation of lithotomy in a frail old man, eighty-two years of age. The first case is one in which the patient was suffering from chronic Bright's disease, and yet an amputation through the knee-joint was successful, so that the patient eventually left Hospital with the wound soundly healed. We are accustomed to look upon such cases as desperate, and we do so justly because we seldom succeed in operative procedures where advanced Bright's disease exists. One could hardly imagine a more unsatisfactory condition for a major amputation than that in the patient referred to. The result, therefore, illustrates that even under such unfavorable constitutional conditions, where an operation becomes imperative because of the local trouble, there is a possibility that we may attain success. The point is an important one because we are tempted to look upon such cases as hopeless, whilst it is obvious that we should give the patient the benefit of what chance there is of relieving him by operation.

The second case is one in which the operation of amputation above the ankle was successfully performed in a case of pulmonary tuberculosis where both lungs were affected.

Case 1. Amputation for extensive cellulitis of the leg in a patient who was the victim of chronic Bright's disease.

This man, 56 years of age, came under my care in July, 1897. A few weeks previously a doctor in the country had opened a cellulitis in the left foot. It was first opened on the dorsum of the

foot and subsequently in the sole. His doctor informed me that the patient had had chronic Bright's disease for the past two years at least. The openings did not discharge freely and acquired a very unhealthy appearance, the foot became enormously swollen and the cellulitis now began to spread up the leg. When he came under my care he had a tremendously swollen condition of the foot and leg, resembling in appearance a case of elephantiasis.

Under chloroform the limb was examined thoroughly and free incisions were made in various directions. On cutting into the tissues they presented on section a ground-glass appearance and were very firm and solid to the feel. In the calf free pus was found lying beneath the superficial fascia ; this was of a thin ichorous character. Free incisions were thus made in the foot and leg. Subsequently the wounds were dressed frequently and well irrigated, but there was never a great deal of discharge and the swelling rather increased if anything, the tissues still maintaining a firm solid condition. An unhealthy granulation tissue, œdematous in character, formed about the edges of the incisions, but there was little tendency to contraction and healing of the wounds or to a diminution of the œdema. The patient's general condition was extremely bad and the urine contained a large amount of albumen, turning solid on boiling, and also contained tube casts. This condition continued with but little alteration for about six weeks ; the only hopeful sign was that the cellulitis did not tend to spread beyond a point about three inches below the knee.

On consultation with my colleagues at St. Michael's Hospital it was agreed that an attempt should be made, by amputating the limb, to save the man's life. I must say that I was so doubtful as to the possibility of operating by amputation successfully that I at first discouraged the idea of operation, but I subsequently determined to operate.

Amputation was performed on Sept. 16th last. The operation which I chose was Stephen Smith's amputation through the knee joint. It occurred to me that this method of amputating would give the minimum amount of lacerated raw surface in the wound and that consequently it would permit of a more rapid healing of the wound. In the amputation to which I refer the semilunar cartilages are left attached to the lower end of the femur and the flaps are so planned that the length of skin edge requiring suture is reduced to a minimum.

The wound healed throughout by first intention excepting a small point at the posterior extremity. Here, however, a small amount

of discharge occurred which soon became purulent. The pus burrowed and the external semilunar cartilage sloughed away completely and the remains of it was removed from a sinus which formed over the external condyle. The wound was subsequently dressed daily, being irrigated with boracic lotion and dressed with plain sterilized gauze. It gradually took on healthy action and closed slowly. It was completely closed during the early part of January, four months after the operation. The man's general condition has greatly improved. He has put on flesh, has a much more healthy appearance and the amount of albumen in his urine has very noticeably diminished in amount.

Case 2. Amputation of the leg for tuberculous disease of the tarsus and the bones of the leg, in a patient suffering from pulmonary phthisis.

The patient was a young man about 22 years of age. The trouble began in the ankle about nine months before he came under my care. He had for two years suffered from pulmonary tuberculosis, but the disease had not progressed rapidly. He injured his foot in the woods by slipping over an icy log, and wrenching his ankle severely; swelling occurred and pain of a severe character. Openings had been made and drainage provided for, but the condition got progressively worse; he suffered a great deal of pain, and he was anxious to have the foot removed. There was a great deal of swelling about the ankle, and the sinuses were discharging somewhat freely. The patient had a tubercular deposit in both lungs, and it was thought that if the disease in the foot proved to be very extensive, on examination under chloroform, it would be prudent to remove the limb. Subsequent events proved the wisdom of our decision.

On August 19th, amputation was performed two inches above the ankle joint. The disease was very extensive. It was found that every bone of the tarsus was diseased. On section of the bones one found numerous foci of softened bone of a dirty green appearance, each focus surrounded by a congested area of bone. The lower end of both the tibia and the fibula were in the same condition.

The wound healed by first intention; the stitches were removed on the sixth day, when the dressings were disturbed for the first time, and the patient was discharged three weeks after the operation, when he had a firm cicatrix.

Subsequently the patient improved very considerably in his general condition. He gained in weight, and his health was gene-

rally better. The improvement was, however, only of a temporary nature, and he has failed of late; and it is quite evident that pulmonary tuberculosis is making steady progress, and the patient is now losing ground.

CASE 3. Vesical calculus the nucleus of which is the tip of a hard rubber catheter. Removed from a man 82 years of age.

The man came under my care in July, 1897. He had an enlarged prostate, and had been obliged to use the catheter for evacuating the bladder for the past three years. He habitually used a catheter made of gum-elastic material with a hard rubber tip. The tip had become detached, and the old gentleman cemented it in its place with shellac, and then proceeded to insert the catheter. The shellac was dissolved by the urine, and the catheter was withdrawn minus the tip. This accident occurred three months before he presented himself to me for treatment. He was then in a deplorable condition; he had incontinence, and had no voluntary control over the bladder; urine was voided more or less constantly, and his clothes and bedding became saturated. I found that regular catheterization did not prevent this, and I passed a sound for the purpose of determining whether or not a foreign body was present in the bladder; the patient's friends had some doubt as to the accuracy of the patient's statement regarding the catheter tip. I readily detected a calculus by means of the sound, and advised operation.

I operated on July 6th, 1897, and removed the calculus through a median lithotomy wound. The wound healed up, the patient made a good recovery, and urine was subsequently drawn off by catheter, whilst there was no longer the distressing incontinence which previously troubled him. The patient was, however, a frail old gentleman, and had for years suffered from heart trouble, and was subject to peculiar attacks of unconsciousness, which had become more and more frequent during the last year of his life. He died suddenly at his home on October 11th, 1897, three months after the operation for stone.

The nucleus of the calculus in this case proved to be the tip of a catheter, with some red sealing-wax adherent to it. The calculus tip is about a centimeter long, and less than half that thickness; it is coated with a phosphatic encrustation about one millimeter thick. The case is of interest as an instance of operation for vesical calculus in a patient over eighty years of age.

APPENDICITIS WITH PERFORATION*.

By Dr. C. M. Smith,
Orangeville.

CALLED to H. S. on October 5th, 1896. Patient under care of Dr. Dunning, of Mono Mills. Patient's residence eleven miles from Orangeville and four from Mono Mills.

Some four or five years previous to this date, patient was treated surgically for *fistula in ano*. Was seized with pain in abdomen (general) on Friday, 2nd instant. Dr. Dunning had thoroughly emptied colon by enemata, had avoided narcotics and administered triturates of calomel and sodium—which served to control the nausea. At my visit found a young man of twenty-one or twenty-two lying on a settee near the kitchen stove in a low-ceilinged lean-to attached to a log-house.

Pulse 108; small, wiry. Temp. 102.5; tongue coated, with dry centre. Marked swelling in right iliac region extending along inguinal canal, giving obscure impulse on coughing; tenderness over right lumbar and epigastric regions.

Large enemata brought away more or less liquid stools containing traces of oat hulls and what looked like grains of wheat. The triturates were ordered to be continued. Further examination disclosed two swellings over sacro-sciatic foramina, elastic, fluctuating and giving tympanitic resonance on percussion.

Advised operation within twenty-four hours. Did not hear from patient again until 8th instant, when Dr. Dunning wired that parents had consented to surgical treatment. When I reached the case found that valuable time had been lost and that the skin and subcutaneous tissues were infiltrated from anterior superior spinous process to external ring and some distance inward, shewing redness in addition to œdema.

Assisted by Dr. Dunning and Dr. Jas. Hunter, of Orangeville, I proceeded to perform section. An incision three inches long was made parallel with Poupart's ligament, one and a half inches internal to

*Paper read at meeting of Bruce and Grey Medical Association.

spinous process. Separated fibres of external and internal oblique with blunt dissector, but owing to the infiltration had to divide transversalis with knife. Subperitoneal areolar tissue was carefully drawn aside from line of wound and the divided tissues retained by restractors. The lower r. angle of omentum had apparently walled off the abscess from the general cavity, and while carefully exploring externally and posteriorly with finger the pus-cavity was entered. Grumous foul-smelling pus escaped in considerable quantity. Sac flushed with hot solution until latter flowed clear from wound.

Found the appendix with its mesenteriolum folded up along it and nearly detached from the cœcum by ulceration, lying along the posterior aspect of the latter viscus.

This small concretion (spec.) was brought to view while searching for the appendix. The small shred of mesentery which still held the appendix to the cœcum was divided between two pairs of compression forceps, the serrated portions of which were protected by rubber tubing. Oozing did not cease until styptic colloid was applied to this point. The walls of the abscess having been previously guarded by iodoform gauze, the cavity was again flushed until solution returned free from color; stump of appendix cauterized and invaginated into cœcum, the walls of which were brought together over the orifice with half-a-dozen Lembert sutures of chromicized gut.

As primary union could not be expected, a glass drainage tube was left in lower angle of wound, three sutures having been left untied. The peritoneum was brought together by catgut, the aponeurotic structures by silk, and the skin by continuous silk sutures. The latter form was used owing to the waning light and exhaustion of ether supply. The lumen of drainage tube was loosely filled with iodoform gauze before introduction.

Oct. 11. Margins of wound infiltrated throughout lower half. When Dr. D. visited patient on 13th inst. the tube was lying on the surface, having been forced out during the night, owing to restlessness of patient.

Oct. 18. Upper portion of wound had united, but the gray sloughy wall of the cœcum was bulging out between edges of wound.

After splitting edges of aponeurotic structures with sharp perineorraphy scissors, I brought the fresh surfaces together as well as possible by aid of four harelip pins. I was forced to use the utmost dispatch, as the patient appeared to be suffering from alarming collapse, although I had used only local anæsthesia. Free stimula-

tion and hypodermics of strychnia at length restored the patient to a more satisfactory condition. A soft rubber drainage tube was left between the lower two pins. A figure-of-eight suture was thrown around the pins and iodoform collodion applied to line of wound.

Two fœcal fistulæ (small) developed subsequently, but as patient improved these gradually closed.

To the skill and attention of the attending physician, Dr. Dunning, must be attributed the ultimate recovery of this patient, who is at present following the vocation of a barber and was at last account free from that *bete noir* of abdominal sections, namely ventral hernia.

This case illustrates the manner in which the general practitioner is handicapped. The "way-back" surgeon has the impecunious, desperate case of acute disease to deal with, as well as the objections of relatives to the use of the knife, in addition to the absence of trained nursing and all the conveniences of the operating theatre.

THE VARIOUS OPERATIVE METHODS OF DEALING WITH EYES LOST THROUGH INJURY OR DISEASE.*

By G. Herbert Burnham, M.D. Tor., F.R.C.S. Ed., M.R.C.S. Eng,

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BY a lost eye I mean an eye which has been so affected by injury or disease that no operative interference with the eye itself would be beneficial or could be borne; and when interference is needed then the removal of the eye is the only course to be pursued.

The principal reasons, that an eye lost through injury or disease requires to be dealt with in an operative way, are the danger of sympathetic ophthalmia of the other eye, sometimes on account of the severe pain in the lost eye, or for cosmetic purposes. As a rule, heretofore, the chief reason, that any one possessed of such an eye was unwilling or refused to have the eye removed, was the fact that a glass eye would look bad. This timidity was justifiable, for in many cases the effect of the artificial eye was far from pleasing. Now, however, an oculist can almost guarantee a pleasing cosmetic result through the advances made in this branch of ocular surgery.

There are four operative methods I shall speak of, viz., enucleation, evisceration, Mules' operation, and optico-cilio neurotomy. I have performed all these operations, some more frequently than others. Enucleation consists in the entire removal of the eyeball and nothing else, the capsule of Tinon and the surrounding tissue being left. This operation is the most simple, the speediest in performance, and the one from which the patient recovers the most quickly and with the least after disturbance. The glass eye which is put into the orbital cavity is often very difficult to make in appearance like the other, as it is so apt to look more sunken, and the freedom of movement is restricted. Another method, evisceration, consists in cutting away the cornea and a rim of sclero with the ciliary processes attached. The entire contents of the eyeball are now

* Read before Ontario Medical Association, June 2, 1898.

removed, leaving the scleral sac quite bare. The scleral and conjunctival edges are now united with sutures.

The advantage of this operation over enucleation is not as great as might be thought for, and is now seldom practised.

The third method, Mules' operation, has taken the place of evisceration. This operation is evisceration with the addition of placing a glass ball inside the scleral sac,and then uniting separately the edges of the sclera and conjunctiva.

The fourth, optico-cilio neurotomy, is the most difficult of performance. It consists in dividing the conjunctiva, if for the right eye, over the internal rectus. Then, after dividing the tendon, incising all the tissue back to the optic nerve. A pair of scissors is now passed well back along the nerve so as to divide it one inch or so from the eyeball. The eyeball is now turned about so that the cornea points backwards towards the apex of the orbital cavity, and the severed optic nerve points out between the eyelids. The nerve is now divided close to the sclera. At the same time the greatest care is taken to divide completely each ciliary nerve. This latter is difficult to perform fully; it is so easy to overlook a nerve, which is small, and when drawn tight sinks into the sclera so as very easily to escape notice. Also the bleeding, if not properly managed, will cause much after trouble. After this it is necessary again to turn the eyeball about and place it in the orbital cavity so as to be well-covered with the eyelids. If the operation has not been perfectly done, this may be found very difficult or perhaps, impossible at first, and thus the eye is exposed. As you can easily understand this is the most difficult of the four methods given.

Enucleation is apparently the best operation in certain forms of lost diseased eyes, as sarcomatous growths, tumors, panophthalmitis. Many also favor it because it is thought more fully to lessen the danger of sympathetic ophthalmia, and also because it is so much easier to do. Optico-cilio neurotomy, if properly performed, was thought by some oculists to be as safe; but recently some cases of sympathetic ophthalmia, some time after the operation, have made them alter their opinion. However, I think, with a large piece of the nerve removed and the full division of every ciliary nerve, the protection is as great. However, the ease with which a ciliary nerve can be overlooked is one of the drawbacks. Mules' operation is undoubtedly the operation in that class of lost eyes, when the effect desired is that the glass eye, when placed in position, be made to resemble as much as possible the normal eye, in other words where appearance is one of the great objects. Some oculists condemn

this operation on account of the reaction. If the operation be properly performed and the treatment properly carried out, the reaction is not severe nor of so long continuance. Then with three sizes of glass balls to choose from you can make the stump of a size that when the artificial eye is placed upon it, there will be given the full appearance to the eyelid possessed by the normal eye. Moreover, the freedom of movement of the glass eye is also very good. The likelihood of sympathetic ophthalmia after this operation is as small as after enucleation and the cosmetic effect on the whole decidedly superior. I may mention that sometimes there is now used a silver ball, there being less danger of breaking. I think Mr. Brekerton, of Liverpool, introduced this variation.

An eye that is lost through injury or disease is always a source of danger to the other eye. Especially is this the case when the tension is not as firm as in the normal eye.

The rapidity with which the onset of the sympathic affection comes varies greatly. The extremes are a few days to between fifty and sixty years. I remember when resident surgeon to Moorfield's Eye Hospital, London, England, to have had under my observation a man sixty-seven years of age with recent sympathetic ophthalmia, the exciting eye having been lost in childhood. Therefore in warning people of the danger be careful to state no exact time; but to mention the usual length of time, two to six or eight weeks, and also that it may occur at any time from three days to between fifty and sixty years.

Physicians have had hitherto in advising the removal of an eye to combat the plea that often the glass eye looked so bad, and have not been able to gainsay the statement. Now, however, with Mules' operation, they can be much more positive in their assertion that this new operation gives very much greater, surer, and more satisfactory cosmetic results than the operations previously in vogue, with, at the same time, as great protection from sympathetic ophthalmia. In conclusion, I can state that, in cases in which after enucleation the appearance of the glass eye is very unsatisfactory, the operation for the introduction of a glass ball into the tissues of the orbit can be performed resulting in a stump, which latter, when the glass eye is introduced, gives a very much improved and more natural appearance.

Selected Articles.

CLINICAL AND THERAPEUTIC CONSIDERATIONS FROM A CASE OF PREMATURELY MALIGNANT SYPHILIS.

By Dr. de Amicis, of the Royal Navy,
Honorary Assistant in the Royal University of Naples.

THE following is the history of a patient admitted into the "Clinica Dermosifilopatica" of Naples, suffering from severe and premature forms of constitutional syphilis:

Antonio Vitale de Raffaele, twenty-four years of age, bricklayer, unmarried. Nothing of interest in the family history. Has never had any important disease. At eighteen years he contracted simple ulcers of the preputial mucous membrane, followed by swelling and suppuration of the right inguinal glands. In November, 1896, about twenty days after the last coitus, there appeared at the preputial frænum an ulceration with induration, followed by general manifestations consisting of inguinal, cervical, and epitrochlear polyadenopathy and acne of the trunk and limbs.

In this condition he presented himself at the out-door clinic of Prof. De Amicis, where he was ordered hypodermic injections of corrosive sublimate, of which he received only three, preferring internal treatment by pills of the protiodide of mercury. Not improving, he resolved after some time to resume the hypodermic treatment, which was abandoned as soon as he saw himself improving.

In April, 1897, all specific treatment being stopped, the infection had a new phase of recrudescence with cutaneous manifestations, this time much more serious and diffuse, accompanied by a specific lesion in the left eye, and by a general state of progressive and rapid nutritive deterioration. In such a condition he was admitted to the clinic on May 7th, 1897.

Present condition. Young man of normal physical development, organic constitution originally good and robust, at present pallid, weak, and ill-nourished. On the face are seen numerous groups of pustules of the size of a pin's head ; also scars of various sizes. Similar pustules and scars on the trunk. On the limbs are seen numerous deep ulcers, some as large as the palm of the hand, mostly circular, with clearly defined edges, without much inflammatory action, intensely painful, some covered with brown crusts. In the left eye is seen considerable conjunctival hyperæmia, with modification of the color of the iris. The pupillary foramen occluded by small yellowish nodules the size of a millet-seed. Nothing is to be seen in the mucous lining of the mouth or of the genitals. The testicles are normal.

Subjective Symptoms. Photophobia, feeling of heat and tension in the eye, and intense supra-orbital pains. In the inguinal and lateral cervical regions are felt many indolent glandular swellings ; also an enlarged gland in each epitrochlear region. Pressure on the spinal bones not painful.

Diagnosis. Recent malignant constitutional syphilis. Pustular ulcerating, necrotic syphiloderma disseminated, chiefly on the lower limbs. Multiple adenopathy inguinal, cervical, bilateral, epitrochlear; iritis and hypopyon of the left eye.

CLINICAL DIARY.

7th May. Parenchymal injection of calomel in right nates (ten centig.) iodide of potassium a gram, cinchona decoction in the morning, ethereal tincture of iron acetate at noon. Iodoform ointment on the ulcers. Instillation into the affected eye of a few drops of solution of neutral sulphate of atropine (five centig. to ten grams of distilled water). During the following days the dose of the iodide was gradually increased to three grams a day, not neglecting the tonic treatment up to his leaving the hospital. The lesions begin to improve pretty rapidly.

10th May. All the ulcers on the limbs are healing ; an improvement also is seen in the general condition. No reaction at the seat of injection.

12th May. Second injection of calomel in the left nates. The rapid general improvement progresses ; the lesions in the limbs are granulating ; the left eye is perceptibly improving, and already that little purulent deposit in the inferior segment of the cornea is being absorbed.

16th May. The ulcers are almost entirely cicatrized.

17th May. Third injection of calomel. Ulcers of lower limbs are completely cicatrized.

20th May. The ulcers on the face and those on the left arm are completely cicatrized.

22nd May. Fourth injection.

27th May. The patient goes out completely cured of the grave lesions which he had on entering.

CONSIDERATIONS.

From the above history it is clear that it is a case of prematurely malignant syphilis, from the rapid appearance of necrotic ulcers in the greater part of the cutaneous surface, only a few months after the initial lesion, accompanied by a rapid and progressive general deterioration.

Bazin, when referring to these anomalous forms of syphilis admitted three varieties of grave syphiloderma : pustular-ulcerating' tubercular-ulcerating, and gangrenous tubercular-ulcerating. In Badouin's thesis (1889) the author reports 32 cases of prematurely malignant syphilis, and concludes that malignant syphilis is not as rare as classic authors would have us believe. These serious forms present themselves, either immediately after the appearance of the chancre, as a first manifestation, without being preceded by the ordinary secondary phenomena ; or they present themselves later, so that we can with Guibot distinguish a primitive malignant form and a consecutive malignant form of syphilis. Braussè, in 1891, published a case of prematurely malignant syphilis in which the grave symptoms appeared twenty days after the initial lesion without preceding secondary symptoms.

In our case the initial lesion was followed by secondary symptoms somewhat serious (pustular syphiloderma with disseminated acne) ; but these were followed, about five months after the initial lesion, by the very serious conditions above described. As we see then, the infection in this patient presented very soon a rapid evolution from the beginning of the secondary period—it must, therefore, be considered a prematurely malignant syphilis. What cause has rendered here the evolution of the syphilis so malignant ? This is a question which observers are frequently asking. The origin has been attributed to various factors ; alcoholism is one of the chief causes that aggravate syphilis, and, according to Haslund, favors its struggle against the organism. Fournier adds too that alcoholism is one of the factors that predispose to cerebral syphilis, and for that reason the latter is rarely seen in children. Other

causes of aggravation of syphilis are advanced age, scrofula, chronic malaria, debilitating causes of any kind, especially pregnancy, hereditary or acquired predisposition, poor resisting powers of the tissues, vulnerability or antecedent changes in the blood vessels; absence or insufficiency of treatment at the beginning of the infection (Fournier) and physiological poverty of the organism, poor alimentation, physical and intellectual abuses—in short, everything that can contribute to diminish organic resistance. We should add also some states of chronic poisoning, as by morphine or lead. In our patient none of these causes are to be noted. We must admit also a certain individual predisposition, which resolves itself into the fact of being or not being a good soil for the syphilitic virus, but that can be decided only *a posteriori*. In our case it seems to be the only cause of the malignity of the syphilis.

Diday tried to show in the syphilitic virus a condition of *greater* or *lesser* force, whence a *grave* and a *mild* syphilis. This has been opposed by most authors. However, in the present state of our knowledge in bacteriology, if we were to judge by analogy, we could not deny that the syphilitic virus, like other virulent principles, could, under given circumstances, increase its virulent activity, or diminish it, and we could then attribute a malignant syphilis to the *greater state of force of the virus*. But, in ignorance of these special biological conditions of the syphilitic virus and in presence of what clinical experience daily teaches us, that is to say, that syphilis taken from the same source by two individuals can become benign in one, malignant in the other; and also the fact that often a syphilis running an ordinary course may be contracted from one suffering from malignant syphilis. These facts make us give more value in our case to the *quality of the soil* than to the *kind of seed*. Not rarely this special vulnerability of some organisms towards syphilis is shown from the time of development of the virus in the initial lesion, which becomes necrotic and phagedænic, but in our patient this latter followed the ordinary course.

Our case is another proof of the value of mixed treatment and especially of the calomel injections in grave forms of syphilis. For some time calomel injections, extolled by our Prof. Scarenzio, have been declared to be of great efficacy in forms of syphilis that resist ordinary treatment.

Nicolich, in the report of Trieste Hospital for 1887, relates several cases of syphilis similar to ours, cured after three or four injections of calomel. He had no bad results, even when he gave as much as 20 centig. in one injection. A similar report was made by

Thibierge at the Congress of Lyons in August, 1894. Fournier, although not very favorable to calomel injections as a general rule, has stated that in two cases of prematurely malignant syphilis he had particularly good results. Doctor Gabriel Felix in his thesis written in 1896 considers this treatment in cases of malignant syphilis the surest remedy yet discovered. At the meeting of the Therapeutic Society of France in December, 1896, the celebrated syphilographer, Jullien, was enthusiastically in favor of calomel injections and affirmed that the views of Prof. Scarenzio have been realized beyond his hopes, since these views represent the most radical progress in the treatment of syphilis during this half of the century.—*Translated from Giornale Internazionale delle Scienze Mediche for* THE CANADIAN PRACTITIONER *by Dr. Harley Smith.*

Editorials.

THE ONTARIO MEDICAL ASSOCIATION.

THE meeting of the Ontario Medical Association for 1898, although not particularly brilliant in any way, was a very pleasant and successful one. Dr. Britton, as president, pleased everyone; no president can do any more. The Committee on Papers and Business, under the chairmanship of Dr. McPhedran, arranged an excellent programme. A few of the discussions were animated and interesting, some were rather dull and flat. It is somewhat unfortunate, and rather surprising, that the character of the discussions has not improved in recent years; in fact, many think it has to some extent deteriorated. It would probably be well for the committee in the future to put forth more strenuous efforts to make discussions on papers a leading feature of the meetings.

The Committee of Arrangements made things very pleasant for the visitors. Dr. Ryerson, the chairman, gave a most enjoyable smoking concert at his residence after the evening session of the first day. The luncheon on the second day at the Royal Canadian Yacht Club, under the chairmanship of Dr. Ryerson, was a complete success. Dr. Jas. F. W. Ross entertained a party on the *Oriole*, Mr. George Gooderham's crack sailing yacht. Wind and weather being favorable—in fact, simply perfect—those on board enjoyed themselves immensely. A number went over to the Island on the Royal Canadian yacht, *Hiawatha*, and spent a pleasant hour on the beautiful grounds of the club. Others, under the guidance of Dr. Arthur Jukes Johnson, took a trip on the trolley cars, which had been placed at the disposal of the association by the Toronto Street Railway Company. On the evening of the second day, Dr. and Mrs. Price Brown were "at home" to the members and others to meet Dr. Shurly, of Detroit, the president of the Michigan Medi-

cal Association. A very pleasant evening was spent. The social events, only a part of which we have recorded, did much to add to the pleasure of those in attendance at the meeting.

INTER-PROVINCIAL REGISTRATION.

WE think that, without doubt, the most important medical question in Canada to-day is that which pertains to Inter-Provincial Registration. The gross carelessness and indifference which the Ontario Medical Council has shown in connection with this subject during the last ten or fifteen years is, to say the least, very remarkable. This carelessness has amounted really to discourtesy towards the Canadian Medical Association, manifested on various occasions; and yet, of course, no one person means to be discourteous. There is a certain section (26) of the Ontario Medical Act, which has been in existence for over twenty years, and has been quite sufficient for the Council. This is simply thrown at the heads of deputations from the other provinces in a most lordly and supercilious fashion whenever and wherever occasion arises. "We are the people who live in Ontario; you people that live in the outlying districts of Canada must come up to our standard; we will submit to no degradation; we are virtuous, you are not, therefore keep away from us, and defile us not." This tone is very lofty and fine in a way, but is really not worthy of the premier province of Canada, which might better afford to be generous as well as just.

We are glad to be able to say that a few members of the council have for years entertained broader views, but have not been able to impress their colleagues with the importance of the subject. We understand that certain others fear that the removal of the fence might prove disastrous by allowing practitioners from other provinces to come into Ontario. It may be well to remember that there are two sides to that question. We have now more doctors in proportion to the population than the other provinces. In the interchange that is likely to take place under inter-provincial registration we would probably have many more going out than coming in to Ontario. This is especially true of the newer parts of Canada. The present regulations tend to prevent large numbers of our younger and sometimes older, practitioners from going out to the newly-developing districts in the far West. We only refer to this aspect of the case incidentally, and not because we are proud of any such selfish line of argument. We prefer to take a wider view of the subject.

We want no low standard, but we want a common standard for our whole Dominion. In time we might hope for a common Imperial standard. The following words from an impartial outsider, Lord Lister, will show to some extent what independent men, well capable of judging, think about the matter: "I trust the day may come when, as it is now with Great Britain, so it may be with Canada, your degree (University of Toronto) will confer a license to practise over the whole of Canada, and the license to practise anywhere in Canada will be accepted by you." If for degree of the University of Toronto we substitute qualification of the Ontario Medical Council it would be more suitable for this country. We simply wish to record Lord Lister's opinion that there ought to be one license for Canada, as there is one license to practise in Great Britain.

THE INTERNATIONAL ASSOCIATION OF RAILWAY SURGEONS.

WE have referred in former issues to the meeting of the above association which is to be held in Toronto, July 6, 7 and 8. As already stated, the meeting will be held in the Normal School buildings, St. James' Square. There will be a formal reception on the first day, when it is expected that Sir Oliver Mowat, Lieut.-Governor of Ontario, Mayor Shaw, of Toronto, and others will welcome the visitors. The committee of arrangements have provided a steamer on which the members in attendance will be invited to take a short sail, disembarking at Exhibition Park, where refreshments will be provided by the Council of the City of Toronto.

On the morning of Saturday, July 9, the members, or a large portion of them, will visit the Muskoka district on a special train provided by the Grand Trunk Railway. After reaching Gravenhurst the party will be taken round a portion of the lakes on steamers supplied by the Muskoka Navigation Company. Refreshments will be served on the steamers, and also at Port Sanfield and the Muskoka Sanitarium.

Reports received thus far are very encouraging to the officers of the association. It is expected that the attendance will be large, and that many very interesting papers will be read. Toronto has become very popular in recent years as a place for holding conven-

tions especially amongst the citizens of the United States; and we are told that a large number of railway surgeons from all parts of that country have promised to attend.

EXAMINATIONS FOR LIFE INSURANCE.

CERTAINLY the most important factor in the success of a life insurance company is the efficiency of its medical examinations. It is in the interest of the policyholders and stockholders alike that the very best men obtainable should make the examinations, and that the medical supervisors should be men of the highest order of excellence. Some of the companies recognize this and make careful enquiry before appointing their examiners. But too many allow themselves to be influenced by other motives; and medical directors, as well as local examiners, are chosen because of their social prominence, influential connections, or because of the amount of stock or insurance their wealth permits them to take. Directors are apt to be influenced by a doctor's reputation with the public. Unfortunately this is not a true index of his professional attainments, for men with very moderate attainments frequently have large practices.

Life insurance examinations, whenever it is possible, ought to be made by men with special qualifications and training for such work. The fact that one is an eminent surgeon or a successful accoucheur is not of itself a guarantee that he is a good examiner. He must, in addition, be skilled in physical diagnosis, painstaking, and possessed of good judgment.

There can be no doubt that much of the work is wretchedly done. During the past two years the writer has met with three instances in which the company has had to pay a heavy penalty for the incompetence or carelessness of its examiners. One young man had been afflicted with phthisis for nearly twenty years. He had had repeated hæmorrhages, and his right lung was so contracted that the heart was crowded over under the right nipple. And yet a duly qualified practitioner, enjoying a large practice, and an excellent reputation with the public, recommended him for a policy, which was granted. He died, within two years, from the steady progress of the disease.

Another patient, who had been under treatment for phthisis for some months, was examined and passed, and the friends of the patient enjoyed within a few months the penalty the company paid for the ignorance of its examiner. Examination of a third for a

large policy was declined because it was known to the examiner that the applicant had a bad aortic regurgitant murmur. He went to the examiner of another company and was accepted. He is now suffering from cerebral embolism, and cannot live very long. Not one of these three would have been accepted by an examiner skilled in physical diagnosis.

In the fraternal societies it is a notorious fact that the medical supervisor is seldom chosen because of special fitness for the position, but rather because he was clever enough to ally himself with the winning "slate" at the convention. The examinations for these fraternal societies are, for the most part, loosely conducted. In the first place, the fee is so niggardly as to discourage careful work. Then the local examiners are chosen because they belong to the lodge or have a "pull" with its leading spirits. Fraternal insurance is doubtful enough without this added danger.

Meetings of Medical Societies.

TORONTO MEDICAL SOCIETY.

THE last regular meeting of the society for the year was held in the council building on the 26th May, 1898. Dr. T. F. McMahon presided. The minutes of the previous meeting were read and adopted.

Dr. H. Hook Oldright read a paper on tuberculous inguinal glands, resulting from a wound in the foot. It was discussed by Drs. Parsons, Smuck and Oakley.

Dr. Graham Chambers reported a case of purpura hæmorrhagica.

Dr. Webster reported a case and presented a patient—general septic arthritis. A number of the larger joints he had drained. The patient began to improve after the administration of antistreptococcic serum.

The treasurer's report was then received and adopted.

Dr. Parsons moved that the meetings be held fortnightly instead of weekly. Lost.

The motion to lower the fee was withdrawn.

Dr. W. J. Wilson moved, That, in the opinion of the Toronto Medical Society, no one should receive free treatment as an indoor patient in our public hospitals, except those receiving their hospital maintenance from the municipality to which they belong. That a copy of this resolution be sent to the public hospital boards and to the medical council. That the president and Dr. B. E. McKenzie and the mover be a committee to see that the spirit of the resolution be carried out; and that the secretary communicate with the other medical societies with a view to securing their cooperation in the matter. Carried unanimously. The society then adjourned.

The election resulted as follows: President, A. Primrose; first vice-president, F. Oakley; second vice-president, J. Webster; corresponding secretary, M. Currie; recording secretary, J. N. E. Brown, (re-elected); treasurer, G. H. Carveth, (re-elected); council, W. J. Wilson, J. E. Graham, and T. F. McMahon. The society then adjourned until the first Thursday in October.

TORONTO CLINICAL SOCIETY.

The 46th regular meeting of the Toronto Clinical Society was held in St. George's Hall, Toronto, May 11th, 1898.

President Dr. Albert A. MacDonald in the chair. The following Fellows were present: A. A. MacDonald, J. A. Temple, G. S. Ryerson, W. H. B. Aikins, A. Primrose, G. A. Peters, G. Boyd, Edmund E. King, F. Fenton, H. A. Parsons, A. Baines, W. Oldright, R. Dwyer, J. N. E. Brown.

Dr. Brown gave notice of motion, that in view of the fact that the Clinical Society had its full quota of Fellows, and as there were a number of eligible applications for Fellowship, any Fellow absenting himself from all of the meetings of the society for one year should have his name struck from the roll.

Dr. William Oldright presented a boy, aged six, whom he had operated upon for talipes equinus, doing a tenetomy of the tendo achilles. The patient was aged six, and the trouble had been in existence since he was eighteen months of age. The affection had supervened after a long walk. Photographs before and after the operation were shown. He had applied a plaster paris splint to keep the foot in the corrected position. The boy was wearing a thick-soled shoe on the affected side.

Dr. Primrose stated it to be his experience that most cases of talipes equinus were the result of injury. He reported a case following a gunshot wound.

Dr. Primrose reported a case of gunshot wound in which the bullet had entered the palm of the hand and had passed completely through the carpus, and lay situated on the dorsal aspect of the wrist, below the head of the ulna. The "X" rays revealed the situation of the bullet, and only a small incision was necessary to extract it.

The doctor reported a second case, that of a boy who was accidentally shot by a 44 calibre revolver last Christmas. The bullet entered the body at about the level of the 10th rib, three or four inches from the median line. It was probed for at the time unsuccessfully. The wound healed up. About eight months after the boy complained of pain in the hypochondriac region. This was followed by the vomiting of blood and purulent material. The patient became very weak. The "X" rays were used and showed a tumor of the left hypochondriac region. A tumor in this region could be felt, and it was a question whether it was in the abdominal wall or not. An exploratory incision revealed an enlarged spleen. It ap-

peared from enquiry that the patient had suffered from malaria, although the blood count showed only 220,000 white corpuscles.

Dr. Primrose reported a third case in which the patient was injured from the bursting of a gun. The man had been experimenting with smokeless powder and had used too heavy a charge. The left arm was severely lacerated by a piece of the barrel. It was probed for but could not be felt. The "X" rays showed it distinctly lying between the bones of the forearm. In the upper arm there was a piece of the barrel one-quarter of an inch square to be seen in front of the humerus. A good deal of cellulitis had set in. Operation was done, the piece in the lower arm being found, the upper one not. The patient was improving. An interesting nerve involvement had taken place involving the median and ulnar nerve.

Dr. Boyd, who had charge of the case Dr. Primrose reported first, said he was able to reach the bullet with a probe, but thought it wise not to attempt to extract it through the palm for fear of dangerous hæmorrhage.

Dr. Parsons discussed the question of leucocytosis in malaria, pointing out that as long as the malarial organisms exist in the body the leucocytes will not increase, but so soon as quinine is administered there is a regular inflammatory leucocytosis.

Dr. Primrose closed the discussion.

Dr. W. Oldright presented a patient upon whom he had resected a portion of two ribs for necrosis.

Dr. Oldright presented another patient from whom he had removed a wedge-shaped portion of the first metatarsal bone to correct a mal-position of the great toe caused by a bunion.

Dr. J. A. Temple presented a specimen of an ectopic gestation which he had removed from a woman aged twenty-four, mother of one child. Two weeks before she consulted him she suffered from pain in the left side. She had missed two periods. The rupture had induced a state of collapse. After a good deal of persuasion an operation was consented to, and done at 11 p.m., when the patient was almost *in extremis*. The abdomen was found full of blood, and the break close to the cornu of the uterus; so close, indeed, that the cornu of the uterus had to be transfixed to secure the pedicle. Hypodermic and rectal administration of stimulants was resorted to, and the woman made a good recovery. One point that had rendered the diagnosis more difficult was that the woman positively asserted that she was not pregnant. She stated that she had missed her periods frequently. The text-books would lead us to

believe, Dr. Temple asserts, that this accident occurs only in women near the menopause, or in those who have borne no children for some years. The above cases, with several others he had seen, led him to disagree with this statement of the authors.

Dr. MacDonald discussed the question of pain in ectopic gestation and the causation of the trouble.

Dr. A. Primrose presented a hernial mass containing a piece of the omentum, adherent to the sac. This procedure, he stated, shortened the operation very much.

Dr. Edmund E. King presented two similar specimens in the removal of one of which he had followed a similar plan. The other contained a large mass of omentum, not adherent at any place, but so constituted at the neck of the sacs that reduction was impossible. The mass of omentum weighed nearly one-half-pound.

Dr. W. Oldright discussed the question.

The election of officers for the coming year was then proceeded with, and resulted as follows :

President, F. LeM. Grasett ; Vice-President, G. A. Bingham ; Corresponding Secretary, H. A. Bruce ; Recording Secretary, John N. E. Brown, re-elected ; Treasurer, W. H. Pepler ; Council, W. B. Thistle, G. Boyd, F. Fenton, H. J. Hamilton, and G. Chambers.

The retiring President, Dr. MacDonald, was then tendered a vote of thanks for the acceptable manner in which he had presided over the meetings for the past year. He, in a few words, expressed his thanks to the society for their appreciation of his efforts and for the assistance they had given him during the year.

The society then adjourned for refreshments.

The next meeting will be held on the second Wednesday in October.

ONTARIO MEDICAL ASSOCIATION.

THE eighteenth annual meeting of the Ontario Medical Association was held in Toronto, June 1st and 2nd, Dr. William Britton, of Toronto, presiding. Dr. E. L. Shurley, President of the Michigan State Medical Society, was introduced and given a seat on the platform.

Dr. A. McPhedran presented the report of the Committee on Papers and Business, and moved its adoption. Carried.

The reception of the report of the Committee on Arrangements was postponed.

Dr. Greig, of Toronto, read a paper on "Infant Diet."*

Dr. George Peters, of Toronto, opened the discussion on surgery. Subject, "Treatment of Fractures of the Skull."* This was discussed by Drs. Bingham, T. T. S. Harrison, T. K. Holmes, and I. H. Cameron.

Dr. Peters closed the discussion.

Dr. Samson, of Windsor, read a paper on "Conclusions Culled from Thirty Years' Experience."

The president read a communication from Dr. R. Rogers, chairman of the Committee of Foreign Invitations of the American Medical Association, extending to the members of the Ontario Association an invitation to be present at the Denver meeting.

On motion of Dr. Harrison, seconded by Dr. McPhedran, a vote of thanks was tendered to the American Association for their kind invitation.

The secretary read the minutes of the morning session.

Dr. Ryerson read the report of the Committee of Arrangements, which was adopted.

Dr. Bruce Smith presented the first interim report of the Committee on Credentials, which was adopted.

Dr. Britton then delivered the presidential address (see page 321). He was tendered a hearty vote of thanks, on motion of Dr. John Coventry, seconded by Dr. Harrison.

Dr. W. J. Wilson moved that the regular order of business be suspended, as he had a resolution to bring before the meeting. Carried.

Dr. Wilson moved, that in the opinion of this association no one should receive free treatment as an out-door patient in our public hospitals, except those receiving their hospital maintenance from the municipality to which they belong.

Dr. Samson moved in amendment that a committee consisting of Drs. Coventry, John Wishart, T. K. Holmes, Bruce Smith, A. H. Wright, J. C. Mitchell, W. J. Wilson, and C. O'Reilly be appointed to consider the various recommendations made in the president's address. On motion of Dr. Ross, seconded by Dr. Powell, Dr. Wilson's resolution was tabled.

Dr. A. T. Hobbs, of London, read a paper on "Some Present Methods of Treatment of Patients at London Asylum for the Insane." *

This was discussed by Drs. J. Russell, Bruce Smith, and J. F. W. Ross.

The association then divided into sections.

* Will appear in THE CANADIAN PRACTITIONER.

MEDICAL SECTION.

Dr. J. C. Mitchell was appointed chairman in this section, Dr. Brown acting as secretary.

Dr. R. Ferguson, of London, read a paper on "The Injurious Effects of our Over-wrought School System on the Health of Public and High School Pupils."

Dr. Ferguson, at the end of his paper, introduced the following resolution :

That this section of the Ontario Medical Association expresses its conviction that the school pupils of this province are overworked, that the examination system is overdone, and that the strain and cramming due to excessive study is injurious to the mental and physical constitution of the pupils.

That this section recommends that the number of school studies be lessened and that the curriculum be framed with a due regard for the mental capacity and the preservation of the health of the school children.

This was discussed by Drs. Sheard, Spence, and Britton.

Dr. Ferguson closed the discussion.

The chairman suggested that those who had spoken on the subject constitute a committee to consider the resolution and report before the general session of the association.

Dr. C. J. O. Hastings read a paper on "Toxæmia of Pregnancy."

A paper on "Vicarious Urination" was presented by Dr. A. T. Rice, of Woodstock.*

This was discussed by Drs. Adami, Hastings, McLurg, Cruickshanks, McCallum (London), Fenton, Chambers, Dr. Rice closing the discussion.

Dr. C. B. Oliver's paper on "The Traumatism of Labor," was taken as read.

Dr. Walter McKeown read a paper on "The Application of the Principle of Osmosis to the Treatment of Toxæmia."*

Dr. Olmstead's paper was postponed.

SURGICAL SECTION.

Dr. Angus McKinnon was appointed chairman of the section, and Dr. Herbert A. Bruce secretary.

Dr. A. Primrose presented a paper on "Operative Methods in the Conservative Treatment of Tubercular Joints."* This was discussed by Drs. Coventry, A. Davidson, H. P. Galloway, and C. L. Starr.

*Will appear in THE CANADIAN PRACTITIONER.

Dr. Primrose replied.

Dr. Homes was appointed chairman while Dr. Homes read his paper on "Supra-Pubic Prostatectomy." This was discussed by Drs. A. B. Welford, Greig, Forfar, H. H. Oldright, Holmes, and Peters.

Dr. McKinnon replied.

The section then adjourned.

Evening Session.

Dr. McPhedran presented his paper on "Cretinism in Ontario,' illustrated with lantern slides.

Dr. H. A. McCallum opened the discussion in medicine on "Immunity in Excretion and Cure." This was discussed by Dr. Anderson.

Dr. J. C. Adami, of Montreal, read a paper on "Syphilitic Cirrhosis."*

Thursday Morning.

The president ruled that papers read be handed to the secretary to be disposed of by the Committee on Publication.

Dr. Holmes, of Chatham, opened the discussion in Gynæcology, subject—"Carcinoma of the Uterus." This was discussed by Drs. Rowe, Georgetown, and A. A. Macdonald, of Toronto.

Dr. A. H. Wright presented a paper on "The Management of Difficult Breech Labors."* The essayist demonstrated his method by the use of a manikin. Drs. C. J. Hastings, W. Oldright, Bray, and Rice discussed the paper.

Dr. J. H. Richardson was invited to the platform, and briefly addressed the association.

A communication was read from Dr. A. M. Rosebrugh, secretary of the Prisoners' Aid Society, regarding the establishment of a home for inebriates. The president said he would, with the consent of the association, appoint a committee whom he would ask to consider the matter, and report at the next annual mee ing. This was approved of by the meeting. The president referred the matter to the Committee on Public Health.

Dr. McKinnon begged the privilege of introducing a motion: That the dinner of the association take place on the first evening of the association, and that the out-of-town members pay their own way. Seconded by Dr. Rowe. Carried.

The association then divided into sections.

*Will appear in THE CANADIAN PRACTITIONER.

MEDICAL SECTION.

Dr. A. T. Rice, of Woodstock, was appointed chairman of this section.

Dr. R. Doan, of Harrietsville, read a paper on "My Experience with Antitoxin in the Fall of 1897." This was discussed by Drs. E. L. Shurley, C. Sheard, Price Brown, Adami, L. M. Johnston, McPhedran, and Samson. Dr. Doan closed the discussion.

Dr. Heggie then read a paper on "Hyper-resonance of the Chest, a Premonitory Symptom of Pulmonary Tuberculosis."

Dr. P. H. Bryce read a paper on "The Effect of the Climate of our Canadian Northwest on Patients with Tuberculosis."

The section then adjourned.

SURGICAL SECTION.

Dr. N. A. Powell read a paper on "Cat-gut, Gauze, and Sponges—What are the best Methods of Their Preparation."

Dr. Oldright, sr., read a paper on "When Should We Operate," illustrated with cases. This was discussed by Drs. McKinnon Riddell, McKenzie, C. Starr, and Holmes.

Dr. G. H. Burnham read a paper on "The Various Operative Methods of Dealing with Eyes Lost through Injury or Disease (see page 352). This was discussed by Dr. Chas. Trow.

The section then adjourned.

The association then adjourned for lunch which was tendered to the out-of-town members by their Toronto confreres and served at the city club house of the Royal Canadian Yacht Club.

A clinic followed at the Victoria Hospital for Sick Children. Dr. W. B. Thistle showed two cases of rheumatoid arthritis. Dr. Geo. Peters showed (1) a case of teratoma—two tumors on the back of a child, each containing intestine; (2) a case of ectopia vesicæ with prolapse of the rectum; (3) a case of empyæma.

Dr. Primrose showed (1) a case of psoas abscess in which he had operated without drainage; (2) a case of deformity due to birth palsy; (3) a case of arthrectomy for tuberculosis of the knee-joint; (4) a case of Calot's operation for forcible reduction of spinal deformity.

Dr. Crawford Scadding made some remarks on the administration of chloroform in the prone position. He showed a case of rickets.

Dr. Powell showed a case in which he had fractured both lower

limbs by manual force followed by plaster paris splintage for the correction of deformity.

The hot air bath as used in the treatment of surgical and medical diseases was showed and its operation demonstrated.

Evening Session.

Dr. Britton presided.

The minutes of the preceding session were read and adopted.

Dr. McPhedran presented the report of the Committee on Nominations. It was as follows: next place of meeting, Toronto. President, W. J. Gibson, Belleville; first vice-president, J. F. W. Ross, Toronto; second vice-president, I. Olmstead, Hamilton; third vice-president, W. J. Rowe, Georgetown; fourth vice-president, N. McCrimmon, Kincardine; general secretary, John N. E. Brown; assistant secretary, E. Hurlbert Stafford, Toronto; treasurer, Geo. Carveth, Toronto. To the Committee on Credentials were added W. J. Wilson and W. G. Greig, Toronto; to the Committee on Public Health, J. Hutchinson, London, and Gilbert Gordon, Toronto; to the Committee on Legislation, J. G. Mitchell, Enniskillen, and John Samson, Windsor; to the Committee on Publication, J. T. Fotheringham, Toronto, and V. Anglin, Kingston; to the Committee on By-laws, J. Wishart, London, and A. McKay, Ingersoll; to the Committee on Ethics, A. McKinnon, Guelph, and G. Hodge, London; to the Advisory Committee, Wm. Britton, Toronto. The report was adopted.

Dr. Samson was then appointed to the chair.

Dr. W. Britton presented the report of the committee appointed to consider the resolution appended to the paper of Dr. Ferguson. It was as follows:

The committee appointed yesterday by the medical section to prepare a resolution for submission to the association on the subject of over-study in the public and high schools of Ontario, and other matters pertaining thereto, beg leave to recommend the adoption of the following resolution:

Inasmuch as the promotion and maintenance of the public health constitutes one of the most important objects for which the Ontario Medical Association was organized, it is submitted that, while fully recognizing the high standard of general education attained under our provincial school system, it is the opinion of this association,

(1) That the school children are overworked to the detriment of their mental and physical health.

(2) That in many schools the ventilation and air space per pupil are not ample to fulfil the proper sanitary requirement.

(3) That the lighting of the school-room is often so inadequate or so badly arranged as to induce various forms of visual defects.

(4) That while some provision has been made for physical exercise there is room for improvement in this respect.

(5) That home studies are, as a rule, made too arduous to allow for such rest and recreation as are essential to physical growth and development.

It is therefore recommended :

(1) That the number of subjects of study prescribed by the Education Department be lessened.

(2) That homework be curtailed.

(3) That less exacting examinations be imposed on the pupils.

(4) That more time during school hours be devoted to physical culture.

(5) That school trustees should confer with members of the medical profession as to the lighting, ventilation, and capacity of school-rooms.

(6) And that the curriculum generally be framed with full consideration of the paramount necessity for preserving the physical health of the rising generation.

Dr. Britton moved the adoption of the report. Dr. Peter Bryce seconded the motion. It carried unanimously.

Dr. Ross, Minister of Education, who was present, was then called upon. He expressed his pleasure at the recommendations made by the association, and invited the president to appoint a committee to confer with him regarding the points touched upon in the report.

All of which is respectfully submitted.

The resolution was signed by Drs. Britton, Sheard and Ferguson.

The president named the following gentlemen as members of the committee to confer with the Minister of Education : Drs. R. A. Reeve, A. A. McDonald, D. G. Wishart, E. J. Barrick, A. McPhedran, J. T. Fotheringham, R. Ferguson, A. MacKinnon, C. Sheard, J. Spence, Rowe, G. Gordon, Hutchinson, H. Griffin, P. H. Bryce, C. S. Ryerson, and L. L. Palmer.

The treasurer presented his report, which was adopted.

(See archives for statement of same.)

It was moved by Dr. Britton, and seconded by W. J. Wilson, and resolved,

That this association deplores the fact that in the various hospitals and dispensaries of the province, under the guise of poverty, many designing persons who are quite able to pay a medical practitioner at least a moderate sum for his service, make false representations as to their financial standing, thereby securing gratuitous care and professional advice or attendance, inflicting a grievous evil upon the profession at large, imposing upon the time and skill of those who attend them, and obtaining the charitable consideration which is designed exclusively for the deserving poor; therefore it is further resolved that a representative committee be appointed, consisting of five members from the staffs of as many hospitals, and five chosen from the outside profession with power to add to their number in the same proportion, whose duty will be to make full enquiry during the coming year as to the extent of the evil, and to report to this association at its next annual meeting their conclusions as to the best means for its suppression.

The resolution was discussed by Drs. Ryerson, Bryce, and Fotheringham. Carried.

It was moved by Dr. F. N. G. Starr, and seconded by Dr. T. S. Harrison, that this association desires to express its willingness to approve of some scheme whereby reciprocity between the provinces may become an accomplished fact, without degradation of the Ontario standard, and that its members in meeting assembled do request that the Ontario Medical Council act in conjunction with the councils of the other provinces with a view to bringing about this happy result.

This was discussed by Drs. Powell, Britton, Ryerson, Cruickshanks, and Barrick, and carried.

It was moved by Dr. Barrick, and seconded by Dr. W. J. Wilson,

That it be an instruction to the Committee on Papers and Business to take up the report of the Legislative and Special Committees and resolutions of which notice has been given immediately after the president's address at the next meeting of the association.

This motion was discussed by the mover, the seconder, J. F. W. Ross, H. T. Machell, and Bryce. Lost.

Dr. Barrick then gave the following notice of motion:

That, whereas there is reason to believe there is a widespread feeling among the medical men of this province, that the system now

in vogue of lodge and contract practice is undignified and derogatory to the best interest of the profession, and should be abolished.

Be it therefore resolved that in the opinion of this association the Medical Council be and is hereby memorialized to take a plebiscite on the question of prohibition of lodge and contract practice.

And further, in case the prohibition be endorsed by a substantial majority to immediately, or as soon thereafter as possible, apply to the Local Legislature to have such amendments made to the Medical Act as to put the above in force.

The usual honoraria were then voted to the secretaries.

A letter was read from Dr. C. R. Dickson, president of the American Electro-Therapeutical Association, inviting the members of the Ontario Medical Association to attend the annual meeting, to be held in Buffalo in September.

On motion of Dr. E. H. Adams, all papers unread were taken as read.

Dr. Bruce Smith presented the following report of the Committee on Necrology :

Your Committee on Necrology beg to report the names of the following members of this association who have gone over to the majority during the last year: Drs. Burns, Strange, Burgess, and Clossen, of Toronto; Drs. Miller and Shaw, of Hamilton; Dr. Cronyn, of Buffalo; Dr. Dixie, of Springfield; Dr. Newcombe, of Sandwich; Dr. McClure, of Thorold; Dr. Griffin, of Brantford; Dr. Killock, of Perth; Dr. Hill, of Ottawa; and Dr. Cunningham, of Kingston.

The report was adopted.

Dr. Primrose presented the report of the Committee on Publication, as follows :

The Committee on Publication beg to report that, in consequence of the fact that during the past few sessions of the association members have been permitted to part with their papers otherwise than through the Committee on Publication, the members of the association have not handed their papers to the secretary. The president ruled this morning that all papers should be disposed of through the committee, and that they should be distributed to the various journals. This ruling was, however, too late to affect matters this session, and in consequence the committee have no papers referred to them.

Dr. N. A. Powell presented the report of the Committee on Ethics. It was as follows :

Your committee beg to report that during the year no formal complaints have been sent in calling for action at our hands.

We recommend that, as the supply of copies of the code of ethics adopted by this association is now exhausted, a new issue be arranged for. The code having received a thorough revision when last before the association, it is inexpedient to make further changes in it at the present time.

It was moved by Dr. Samson, and seconded by Dr. Harrison, that the sum of seventy-five dollars be donated to the Ontario Medical Library Association, in recognition of its usefulness to the profession throughout the province generally, if the funds of the association will warrant it. Carried.

The following votes of thanks were then passed :

It was moved by Dr. Gibson, seconded by Dr. C. R. Dickson, that the thanks of this association be tendered to the Royal Canadian Yacht Club for the use of their club-house in entertaining the members of the association.

It was moved by Dr. Dickson, and seconded by Dr. Clouse, that the secretary be instructed to send to the Toronto Street Railway Company the thanks of the association for their kindness in supplying cars for the excursion about the city. Carried.

A hearty vote of thanks was tendered to the Honorable the Minister of Education, for the courtesy manifested in placing once more the handsome rooms of the Education Department at the services of the association.

The meeting then adjourned until the first Wednesday and Thursday of June, 1899.

Book Reviews.

BRIEF ESSAYS ON ORTHOPEDIC SURGERY. Newton M. Shaffer, M.D., Clinical Professor of Orthopedic Surgery, University of New York. New York: D. Appleton & Co. Canadian agent: Geo. Morang.

This volume is a collection of articles that have appeared in the various journals during the past twelve or fourteen years. The papers necessarily overlap one another a good deal, the same ground being covered a number of times. Yet, for the short time it takes to read, it well repays the reader, as it gives a very clear outline of the present status and scope of orthopedic surgery, of course, from the view point of a conservative orthopedist.

The views of the author are very well set forth in his definition of orthopedic surgery. It is as follows: "Orthopedic surgery is that department of surgery which includes the prevention, the mechanical treatment, and the operative treatment of chronic or progressive deformities, for the proper treatment of which special forms of apparatus or special mechanical dressings are necessary."

ORTHOPEDIC SURGERY. A Manual of Orthopedic Surgery, by James E. Moore, M.D., Professor of Orthopedics and of Clinical Surgery in the College of Medicine of the University of Minnesota. 8vo., 356 pages, 177 illustrations. Price, cloth, $2.50 net. Philadelphia: W. B. Saunders. Canadian agents, J. A. Carveth & Co., 413 Parliament Street, Toronto.

This work is intended as a text-book for students and as a ready reference for general practitioners, and as such is a timely production and fills the bill admirably.

It is a concise, clear treatise on the important subject of Orthopedic Surgery, and, with the special emphasis that is laid on early diagnosis, and the simple plans of treatment outlined, will be a valuable aid to one who is not devoting his entire time to orthopedics.

The illustrations, many of which are original, serve beautifully to aid, by appealing to the eye, the understanding of the text. An earnest effort is made in the treatment to follow a middle course between the too radical surgeon, who operates on everything, and the conservative mechanic who never operates.

The success, the author claims, which attends the American surgeons in this department is largely due to their natural inventive genius and mechanical ingenuity,combined with the fact that they fit and apply all apparatus themselves, and do not send their patients to instrument-makers who know nothing of disease. No doubt the general practitioner does too often turn his cases of deformity over to instrument-makers for treatment. This is pointed out as absolutely wrong, as one might just as properly send a patient to a druggist for treatment after making a diagnosis.

The work lacks in its dealing with pathological conditions, paying very little attention to this important branch of the subject.

A COMPENDIUM OF INSANITY. By John B. Chapin, M.D, LL.B., Physician-in-Chief to Pennsylvania Hospital for the Insane. Illustrated. Philadelphia: W. B. Saunders.

The purpose of the author to compile in a condensed and concise form a compendium of diseases of the mind for the convenient use and aid of physicians and medical students has been very successfully accomplished. While making no pretension of being an elaborate treatise on insanity, the work is more than a compend, and the condensation is not made at the expense of clearness in describing the mental symptoms of the different forms of insanity. In the chapter on classification of insanity, while strictly adhering to the scientific aspect of his subject, Dr. Chapin inclines to a position of moderate conservatism. While not departing too far from the long-recognized elements of Pinol and Esquirol, he favors a scheme based on clinical forms as furnishing the best classification. This is practically the plan adopted by the French congress of 1889, and it is one that allows of indefinite expansion to admit new clinical and pathological forms as they come to be demonstrated. He asserts that the time has not arrived when a classification can be based on the pathological conditions of the insane, because too little is known. Observation, experience, and the results of treatment lead to the conclusion that all insanities have an origin in physical changes in the nervous mass, mental and physical degenerations, or in a deficiency of those nutritive processes that sustain the functions of the nervous centers.

The clinical descriptions, while brief, are pen-pictures which are strikingly graphic and life-like. This can scarcely be said of the photographic illustrations.

The sections dealing with the therapeutics of insanity are exceedingly valuable and, coming from one whose wisdom has been acquired by years of experience, possess the merit of being thoroughly practicable. He summarizes the treatment of the insane most succinctly by urging the following procedure: (1) To remove any known cause of ill-health; (2) to promote the normal performance of the bodily functions; (3) to place the greatest reliance upon nutritious food; and (4) to place

less dependence upon drugs. He utters a warning in regard to the abuse of hypnotic drugs. This note of warning deserves more than a passing notice. Too often patients are brought to our asylums whose existing mental disorder is burdened by a new pathological state, due to excessive narcotic drug administration. The indirect effect of excessive hypnotic drugging is to add a toxic agent which retards or even endangers mental recovery. Life itself is often placed in jeopardy in consequence of partial paralysis or impaired performance of the functions of vital centres by this injudicious practice.

Dr. Chapin, having had large medico-legal experience, is able to give many practical suggestions for both lawyers and experts. His definitions are carefully considered and will no doubt be helpful to those who have to meet the requirements of the law. The chapter on medical certificates is especially worthy of attention.

For the general practitioner, who has neither the time nor the inclination to read any of the large systematic treatises on insanity, Dr. Chapin has provided an excellent work, bearing on each page the impress of practical knowledge and experience. Its teachings have all the merit of ripe opinion and all the charm of a vigorous and natural style.

OUTLINES OF RURAL HYGIENE. For Physicians, Students, and Sanitarians. By Harvey B. Bashore, M.D., Inspector for the State Board of Health of Pennsylvania. With an appendix on The Normal Distribution of Chlorine, by Prof. Herbert E. Smith, of Yale University. Illustrated with twenty (20) engravings, 5½x8 inches. Pages vi.-84. Extra cloth, 75 cents net. The F. A. Davis Co., publishers, 1914-16 Cherry St., Philadelphia; 117 W. Forty-Second St., New York City; 9 Lakeside Building, 218-220 S. Clark St., Chicago, Ill.

This little book fills a useful place, giving such detailed information, as is required "about the house and premises" in the rural districts, to persons who are chiefly interested therein and desire to get said information in concise form.

Chapter one points out the elements of danger and safety in wells, and gives directions for the improvement of them. One curious fact is mentioned that with obliquely shelving strata a dangerous vein may suddenly be encountered by an increasing depth. Good directions regarding filter-cisterns are given. Remarks on other sources of water supply and examination of water are given. If the simple and economical directions in chapter two on waste disposal were carried out on farms and country gardens what a pleasant and wholesome change we would often see! We think the flushing tank would be a benefit in the disposal of slop water even if there be no water service.

Chapters three and four, on soil and habitations, give useful hints for making building sites and houses more healthy.

Chapter five, disposal of the dead, gives instances of contamination of stabling and wells with arsenic in some cases and disease germs in others.

The normal distribution of chlorine, chapter five, should be of interest to our hygienic and analytical chemists. The paper, type, and illustrations, and binding are of excellent character. The style clear and concise.

A MANUAL OF HYGIENE AND SANITATION. By Seneca Egbert, A.M., M.D., Professor of Hygiene and Dean of the Medico-Chirurgical College of Philadelphia; Professor of Anatomy, Physiology and Hygiene in Temple College; Member of the Academy of Natural Sciences of Philadelphia, etc., etc. Octavo Vol. of 368 pages with 63 illustrations. Price, cloth, net. Lea Brothers & Co. Philadelphia and New York.

This little book is well-printed and spaced, and on good paper.

The introductory chapter gives some of the most recent statistics, as well as some of the older ones, showing the value of practical hygiene in lessening the death and sickness rates of various countries.

Next follows a chapter on bacteriology of a general character and such as to interest and impress the ordinary reader and the student commencing the study of the subject. Air, outdoor and indoor, is fully considered in the next chapter. The poisonous ingredients of exposed air, and then relative importance and *modus operandi* are very fully considered. The author refers to the work of Drs. Mitchell, Billings and Bergey, as set forth in Vol. xxix. Smithsonian Contributions of Knowledge and the late experiments, indicating that the organic effluvium or effluvia are not so largely responsible as they were until very lately supposed to be, and that more is due to "a decrease of oxygen and an increase of carbonic acid, heat, and moisture."

Dr. Egbert does not, however, readily acquit the organic emanations and reminds us that "it must in fairness be stated that in spite of the later experiments it has seemed to such careful investigators as Brown-Séquard, D'Arsunal, Merbel, and others, to be directly poisonous to lower animals." We may also point out the inconsistency of giving to the Carbon Dioxide in the proportion contained in exposed air any great share of the blame when air containing a much larger amount from other sources may be breathed with impunity.

The chapter on ventilation considers very nicely general principles, but, like most parts of the book, does not profess to go very fully into detail. The author seems to give a sort of *quasi* support to a portable steam radiator for use with gas for purifying the air of respiration, but we cannot see where his fresh supply of oxygen is to come from. We like the way the claims of indirect *versus* direct heats are advocated. We would emphasize his statement that the furnace air should come from a point *outdoors* well up above the ground. Those makers who wish their furnaces to make a good heat record are too much in the habit of taking the air from the inside hall, serving the inmates with the same air over and over again. We think we are quite safe in saying that this is done in over fifty per cent. of our first-class houses, and

in hot water and steam heated houses no systematic provision is made for fresh air.

The next succeeding chapters take up water, food, stimulants, and beverages, personal hygiene, school hygiene, disinfection, and quarantine.

Then comes the removal and disposal of sewage. Dry methods are merely mentioned in a very general way, as also the disposal of garbage. The general principles of the water-carriage system are well set forth. We think the necessity of vent pipes to save traps is rather minimized on pages 310 and 311. The traps ought to be protected by vents whose diameter should be equal to that of the efferent from the trap. We also think the trap, where one is required, in the house drain between the house and sewer should be much closer to the house than "just before its junction with the sewer."

The remaining chapters are devoted to vital statistics and examination of air, water, and food.

The book is a pleasant, readable work, tending to popularize a very useful subject.

Medical Items.

DR. F. T. BIBBEY has removed from Port Hope to Kimberlay, Ont.

DR. K. C. MCILWRAITH, of Toronto, sailed June 1st for England, where he will remain a few months.

DR. JOACHIM GUINANE was married this month, and will live at corner of Wilton avenue and Mutual street.

DR. DON. ARMOUR, Tor. '94, will likely remain in England. He has received an appointment on the staff of University College Hospital, London.

DR. FRANK P. FOSTER, editor of *The New York Medical Journal*, paid a visit to Toronto to attend the meeting of the Ontario Medical Association.

DR. HARRISON, of Selkirk, sailed for England June 5th. He will attend the meeting of the British Medical Association as the representative of the Ontario Medical Association.

WINDSOR was well represented at the meeting of the Ontario Medical Association. Dr. Coventry, past president; Dr. Casgrain, Dr. Sampson, Dr. Cruickshank, and Dr. Raeme.

THE Canadian Medical Association meets in Quebec on August 17-18-19. Let Toronto be well represented. Dr. F.N.G. Starr, Toronto, will be pleased to give any information to enquiring physicians.

DRS. J. ALGERNON TEMPLE, William Wilson, and Allen Baines, of Toronto, attended the annual meeting of the American Pædiatric Association, June 2nd, 3rd, and 4th, in Cincinnati, and after the meeting took a trip through the Southern States.

DR. THEODORE COLEMAN, Tor. '94, has returned from a long post-graduate course at Johns Hopkins and in Germany. He will locate in Toronto, adding another to the M.D. company (unlimited) already here. We wish him every success.

WE regret to learn that Surgeon Lieut.-Colonel Neilson, Director-General Medical Department, met with a serious accident a few days ago by falling down the hatchway of the steamer on which he was proceeding west on departmental business. We hope he will soon be fully recovered.

FEARFULLY AND WONDERFULLY MADE.—"Depend upon it, children," said the benignant old gentleman who was addressing the

Sunday-school, "we were fashioned by a wiser power than ourselves. There was no mistake made in putting us together. If our hands were placed where our feet are, and our feet where our hands are, how could we get along? It would be exceedingly awkward, children, exceedingly awkward. I stretch my hand out this way. I move my fingers like this. Now, what is this an evidence of, children?" There was no reply, and after waiting a moment the speaker answered the question himself. "It is an evidence of design. Don't forget that, children," he continued, impressively. "It is an evidence of design. Suppose, for instance, my eye, instead of having lids and lashes, had legs. Suppose my eyes had legs. How could I use them?" "You could use them in running your eye over the congregation, couldn't you?" replied a deeply interested little boy near the door.—*Chicago Tribune.*

FORTY-NINTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

Denver has redeemed her pledges, and the meeting of this association just closing has been one of the most satisfactory in its history. The very atmosphere of Colorado seems to be imbued with hospitality. The attendance has exceeded all expectations, the registration reaching 1,600. In the absence of President Sternberg, the chair was gracefully filled by First Vice-President Joseph M. Mathews, of Kentucky.

The entertainments provided by the local committee were not only elaborate but pleasing in the extreme, and the memories of Denver's beauty spots will ever remain in the minds of the visiting physicians.

The following officers were selected for the ensuing year:

President—Joseph McDowell Mathews, of Louisville, Ky.

First Vice-President—W. W. Keen, of Philadelphia, Pa.

Second Vice-President—J. W. Graham, of Denver, Col.

Third Vice President—H. A. West, of Galveston, Texas.

Fourth Vice-President—J. E. Minney, of Topeka, Kansas.

Secretary—William B. Atkison, of Philadelphia, Pa.

Treasurer—Henry P. Newman, of Chicago, Ill.

Members of the Board of Trustees—Alonzo Garcelon, of Maine; I. N. Love, of St. Louis, Mo.; H. L. E. Johnson, of Washington, D.C.; X. C. Chappel, of Boston.

Next place of meeting—Columbus, Ohio.

THE

CANADIAN PRACTITIONER

EDITORS :
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MANAGER ADVERTISING DEPARTMENT:
MR. W. LLOYD WOOD.

PUBLISHERS :
THE PRACTITIONER PUBLISHING COMPANY,
TORONTO.

VOL. XXIII.] JULY, 1898. [No. 7

Original Communications.

ON THE STAGES AND FORMS OF SYPHILIS WITH MORE ESPECIAL REFERENCE TO THE HEPATIC MANIFESTATIONS OF THE DISEASE.[1]

BY J. G. ADAMI, M.A., M.D., F.R.S.E.,

Professor of Pathology, McGill University; Pathologist to the Royal Victoria Hospital, Montreal.

IT is remarkable how during all these centuries syphilis has remained sharply distinguished from all other forms of human disease, constituting a class apart. There are many other contagious maladies, not a few chronic infectious disorders, and, now-a-days, we are able to group these together; we can recognize common principles governing their course and effects upon the organism and can see, or think we see, a common principle underlying

[1] Delivered at the meeting of the Ontario Medical Association at Toronto, June 1, 1898.

the morbid changes in one or other tissues from the onset of the disease to its culmination—a principle identical in the infant and in the aged. So we can with syphilis—only habitually we do not. We treat and regard it as a something distinct.

Take, for instance, that disease which, in its chronicity as in the lesions which characterize it, most closely resemble syphilis—tuberculosis. From the onset to the end, at every stage, from the primary lesion to the most extensive generalization of the process, we see one morbid change at work, namely, the focal multiplication of the bacilli leading to the development of tubercles. It is true that according to circumstances these tubercles may vary in their characters from a condition in which small cell infiltration is so extensive as closely to approximate to miliary abscess formation, through conditions of so-called epithelioid cell overgrowth to a state in which fibroid connective tissue development is so excessive as to mask everything else, save, perhaps, necrosis and caseation. But the fact remains that we do not sharply differentiate successive stages of the disease, or consider that the successive stages are characterized by the development of specific manifestations. At the most, in one organ, the lungs, we trace such successive stages of the tubercular process, but we never think of laying down that what is to be made out in the lungs obtains for other organs, and for the body in general. On the contrary, a study of pulmonary phthisis alone has convinced us that the course of tuberculosis varies so greatly according to the interaction of two factors—the condition or reactive power of the tissues, and the virulence of the bacilli—that to attempt to plot out the course of the disease in each case into well-defined stages is an impossibility.

With syphilis it is quite another thing. From Ricord onwards a primary, secondary and tertiary stage have been clearly distinguished, and not only this, but according as to whether the disease is acquired in post-natal life, or has seized upon the individual while in the mother's womb, so do we recognize two different types of the disease.

There is, I take it, no more firmly "fixed idea" in the whole of medicine than that of the absolute existence of these different stages and forms of syphilis. To-day, I do not want to pose as a revolutionist and an iconoclast, for speaking broadly, and regarding the bulk of the evidence before us, I, like all others, must acknowledge the utility of the divisions. But there is a danger in these fixed ideas, in medicine as in all sublunary affairs, and, to say the least, it is of benefit occasionally to enquire whether what is accepted of

all men is so absolutely and entirely fixed and assured as we are accustomed to regard it.

What I am about to say is not novel. The unity of syphilitic lesions has been preached for now more than thirty years, in fact, ever since Wagner pointed out that all such lesions might be referred to the developments of a specific neoplasm. Perhaps Wagner went too far, for there are generalized fibroid conditions, which, as I shall have to point out in connection with the liver, are not directly due to the development of circumscribed neoplasms; but it must be acknowledged that neoplasms or infective granulomata are to be recognized in each stage and form of the disease. Nevertheless, the idea of the sharp demarcation of the different forms and stages of the disease seems to be as firmly planted to-day as it was prior to 1864, and the admirable protest of Nevins Hyde[1] and the writings of others do not seem as yet to have influenced the profession in general.

At the outset, I must point out that it is not even necessary to have any recognizable first stage or cutaneous chancre. We know well that in every case of infection the infectious agent must make an entry from without into the tissues, and in a great number of cases we can discover the point or points of entry, and at such point or points we find evidences of primary local infection, whether on the skin or mucous membranes, and this local infection is strictly comparable with the cutaneous syphilitic chancre. But we also come across cases in which there is a complete lack of evidence of such superficial primary infection; we may find, for instance, the cervical or mesenteric lymph glands affected with tuberculosis without a sign of tuberculosis of the pharynx or tonsils or intestinal mucosa, cases which usually, though mistakenly, are spoken of as "cryptogenetic." What occurs in other diseases must at times occur in syphilis, and in going over my post-mortem records, in which to each case I have subjoined a record of the clinical history of the case, I have been struck several times by observing that, where well-marked tertiary syphilis has been present in the organs, there has not been a sign of old penile or other chancre,[2] and more than once, in following up the

[1] Morrow's System of Genito-Urinary Diseases, Vol. II., 1893, p. 20, *et seq.*

[2] In some at least of these cases, without doubt, the same process has happened as occurs occasionally in connection with vaccinal cicatrices, namely, there has been so complete absorption of the cicatrical tissue that the part becomes in the course of years absolutely normal in appearance. This complete absorption, I need scarcely say, is characteristic of primary lesions of mucous surfaces, and is very frequent in the female.

clinical history, by finding that while the patient has freely admitted that he has led a loose life and suffered, it may be several times, from gonorrhœa, he has denied ever having suffered from chancre (vide case III.) Now presumably an individual who had had a hard sore would not wholly forget the circumstance, nor is it rational to urge that a hospital patient, who admits without constraint that he has led a life of excess and suffered from other venereal diseases, would conceal the previous existence of a chancre. Either then the chancre was so small and inconsiderable as to cause no inconvenience, or the virus gained entry into the system without causing any cutaneous disturbance.

In the female this absence of any superficial or recognizable first stage is especially noticeable; time after time the disease only manifests itself in the secondary stage. I would go so far as to say that the "fixed idea" that there must be a chancre developed at the region of primary infection has led to a thorough and general misunderstanding as to the nature of congenital syphilis. It is a popular fallacy to regard a considerable number of cases in which the father of syphilitic offspring is syphilitic and the mother is apparently free from the disease, as due to the sperm being syphilized, or, if this view be carried to its logical conclusion, it is supposed that the spermatozoon bears with it the syphilitic virus, be it bacillus or whatever the nature of the specific microbe, and introduces it into the ovum at the moment of conception, and thus the offspring develops, syphilized from the start, the mother being and remaining absolutely free from taint. This, as I say, is a popular fallacy. But it is incredible that the germ gain entrance into the spermatozoon, for the spermatozoon being nucleus and flagellum, and scarce anything more, has not the means of ingesting foreign bodies, while we have not a shred of evidence that the syphilitic germ is amœboid and capable of making its way into the spermatozoon.

It is likewise outside the limits of credibility that a virulent organism could be within the minute almost yolkless segmenting human ovum, lying latent in one or other of the cells, the products of segmentation. Such passages of pathogenic microbes on to the surface, and possibly into the eggs, may occur in insects, as Pasteur demonstrated, but the insect's egg contains relatively abundant yolk, and segmentation then may be little influenced by the presence of the micro-organism, provided that this be in the yolk. Even then, I doubt whether the embyro could develop properly, and am inclined to consider that a more reasonable explanation of Pasteur's observations upon the silk worm's eggs is that at a relatively late period

of their development those which come to maturity become tainted either from the surface or from other eggs which have been killed by the multiplication of the germs within them.

If the syphilitic virus gained entry into the unsegmented human ovum, its effects would surely be to lead to the destruction of the ovum. Fœtal syphilis must originate at a later date, and although syphilis in the parents may doubtless have its effects upon the ovum and spermatozoa of the same, and lead to constitutional disturbances in the offspring, progressive syphilitic lesions, the true syphilomata, in the fœtus and infant are *not* inherited, but are congenital, that is to say, acquired in utero after conception. Or in other words, inherited and congenital syphilitic lesions are two very different things. Thus, to return to the main point, if the mother be without sign of syphilis, and the child be syphilitic, the only satisfactory explanation is that the syphilitic virus has entered into the maternal organism and tissues, and has failed to induce any characteristic lesion at the point of entry, but has, nevertheless, through the placenta and chorionic villi gained an entrance into the fœtal tissues; the process arrested in the mother has been developed in the susceptible tissues of the child, and we have here an interesting example of the variability in the manifestations of the disease dependent upon the reactive powers of the tissues.

Were any further word necessary in support of this contention it would be found in the significant way in which the liver is affected in congenital syphilis. Extensive specific lesions of the liver in the acquired disease are relatively uncommon. They are the most common of all lesions in the congenital affection. As Chiari has pointed out, out of 144 cases of congenital syphilis examined by him, the liver was diseased (and that extensively) in 123 cases, or nearly nine-tenths. Were the ovum infected it would be difficult to explain why the liver should thus be especially singled out. When we remember that this organ is the first to receive the blood coming by the umbilical vein, then if the infection originates from the placenta hepatic implication is the natural sequence.

The essential difference between such congenital, or ante-natal, and "acquired," or post natal, syphilis is, that in the former the virus passes immediately into the blood, and so becomes disseminated through the organism, in the latter the dissemination is delayed. The second stage of acquired syphilis is the first stage of the congenital disease.

Again, although as a pathologist not in practice, I have not met with and am little likely to come across the condition, continuing the

analogy between tuberculosis and syphilis,[1] we must, I hold, admit the inherent probability of Kaposi's statement that it is possible to have a primary cutaneous syphilitic lesion, a true specific indurated chancre, not followed by any secondary effects. And, further, it is well established that women who have borne syphilized children, and have themselves shown not a sign of primary or secondary manifestations, may, years after, present unmistakable tertiary lesions.[2]

Up to this point, therefore, it may be laid down:

(1) That from analogy, as from clinical history and absence of any indications of the same, in sundry cases there may be an absence of the primary cutaneous or epithelial manifestations of syphilis.

(2) That individuals may fail to present either primary or secondary symptoms that are recognizable, and yet eventually develop definite tertiary lesions of the disease.

(3) That where the subject is relatively insusceptible it is possible that the disease may be limited to the primary cutaneous manifestation not followed by secondary lesions.

(4) That, as with tuberculosis so with syphilis, the congenital form of the disease begins at what may be termed the secondary stage of the acquired disease, *i.e.*, the stage of general dissemination of the virus through the organism.

THE RELATIONSHIP BETWEEN SECONDARY AND TERTIARY SYPHILIS.

I would now pass on to consider the relationship between the secondary and tertiary stages of syphilis.

Where, in any infectious diseases, we have widespread eruptions, affecting both skin and mucous membranes, we now feel assured that such eruptions are due either to the irritation set up by the actual presence and growth of the specific germs of that disease in the subcutaneous and submucous layers, or to the irritation produced by the products of these germs growing in other parts of the system. And the more we study infections of which we can isolate the specific microbes (streptococcus and pyococcus infections, typhoid, etc.) the more we find the first of these alternatives in force, and, in the case of syphilitic eruptions, the fact that the cutaneous eruptions are

[1] Every pathologist knows, many from personal experience, how frequent among those performing autopsies are cases of strictly localized cutaneous tubercles not followed by extension. Such primary cutaneous tuberculosis is characterized by its tendency to remain localized.

[2] Finger, Arch. f. Dermat. u. Syph. 1890, p. 331.

infective affords clear evidence that the specific virus is present in them.

Such generalized infections of the skin and mucous membranes can only be brought about through the agency of the blood stream, or, otherwise, what is termed the secondary stage of post-natal, acquired syphilis, is the stage of general dissemination of the virus through the system by the blood stream, and of the more immediate results of such dissemination. What has been described as the second period of incubation (the interval elapsing between the development of the chancre and the appearance of syphilodermiæ) is the period requisite for the virus to infect and traverse the lymphatic system on its way from the primary lesion into the blood stream, and then to proliferate in the cutaneous and other tissues up to such a point that eventually it produces a reaction.

It is usually held that the syphilitic virus now especially affects the skin and mucosæ, and that the abundant and varied crop of syphilides—of syphilodermiæ—are the peculiar sign of the second stage, gummatous and more fibrous growths being characteristic tertiary developments. Certainly the eruptions are the prominent features of the secondary stage, but it is too much left out of account that in the early stages of generalization of the disease the internal organs may be, and perchance often are, affected. And what I wish more especially to bring before you this evening is this lack of sharp definition between the anatomical changes in early and late generalized syphilis. This lack is well-shown by a study of the syphilitic liver; indeed, it is a study of several cases of syphilitic hepatitis which have been revealed in the post-mortem theatre at the Royal Victoria Hospital during the last four years which has prompted me to select this more general treatment of the stages and forms of syphilis to bring before you this evening.

The reason why tertiary and secondary syphilis are regarded as so widely distinct is not difficult to comprehend. The disease is rarely directly fatal, especially now-a-days, and it is rarely that we obtain an opportunity to study the viscera during the earlier stages. As Jonathan Hutchinson has pertinently remarked: "The visceral pathology of the secondary stage might form a chapter in the history of syphilis which has not yet been written, and for which we possess few data. It is, however, I feel sure, a great mistake to state that there are none to be obtained." In the address from which I take these words, an address which opened a celebrated discussion at the Pathological Society in London in 1876, he pointed out that abundant facts are on record to disprove the assertion that large

gummata are not to be seen in the secondary stage. He noted that two cases of death from syphilitic disease of the heart, which had come under his notice, had both occurred during the secondary stage and presented myocarditis with gummata, and in one of the two there were also distinct gummata in the spleen and in the testes, while he went so far as to state that the best example of gumma in the liver which he had encountered was in an infant.

To bring forward the evidence presented by the liver as to the identity of the anatomical lesions in the two stages, and as to the continuity or unity of the disease, it will be well to discuss the ways in which the liver is affected in syphilis and run over the different forms of specific hepatic lesions.

It is difficult to realize that scarce fifty years have elapsed since it was first clearly established that the liver is affected in any form of syphilis. The chapter in medical history bearing upon the liver in relation to syphilis is of some interest. Hutton and Fallopius and many of the earliest writers upon the morbus gallicus held that syphilitic ulcers, wherever appearing, were the result of a corruption of the humors, the origin of which was to be looked for in the liver, which had become diseased from the action of a volatile contagion. Others held that this organ was the first to be affected consecutively to disease of the genital organs. This was when every disease was regarded as due to a disturbance of the humors, and, the liver being large and of unknown functions, the severity of the disease almost naturally led to the liver being seized upon as the guilty party in syphilis. When autopsies became more frequent the implication of the liver became seriously disputed: Paracelsus denied that it had any role in disease, stating that he had frequently found other organs affected, but had rarely met with any disturbance of the liver. Morgagni, again in the middle of the eighteenth century, but expressed the views of his contemporaries when he denied any relationship between syphilis and hepatic disorders.

THE LIVER OF CONGENITAL SYPHILIS.

Only in 1848,[1] or according to Hutinel and Hudelo in 1847, was there published any serious study of the liver in syphilis, and then it was not the characteristic gummatous liver of the acquired disease, but the enlarged liver of the congenital condition to which attention was called. In that year, and yet more fully in 1852, Gubler described the liver of congenital syphilis, pointing out its enlargement, its firmness and elasticity. He noted that the changes

[1]Gubler, Gaz. des Hop., Jan. 1848, and Gaz. Med. de Paris, 1852, p. 262.

were often in circumscribed spots only, and here in these very earli est careful studies upon the subject he pointed out that, while the other lesions in the infant were of a secondary nature, the changes in the liver were of tertiary type and allied to the gummatous developments.

Time forbids that I should describe minutely the histological changes occurring in the liver of congenital syphilis. You will find them clearly stated in an article upon diseases of the liver by your distinguished confrère, Dr. Graham, in the recently published Loomis-Thompson System of Medicine, an article which is far and away the best treatise on hepatic disorders by a single individual that has appeared in our language for many years. Suffice it to say that the affected portions of the organ present a combination of the development of minute, somewhat ill defined collections of small, round cells, which we know as miliary gummata, together with a wide-spread development of fibrous tissue, not only along the portal sheaths, but also spreading between the groups of liver cells which present more or less atrophy, in short, a condition of pericellular fibrosis. This fibrosis is in itself what we are accustomed to regard as a peculiarity of tertiary syphilitic manifestations. Yet here it occurs within a very few months of the primary lesion, when cutaneous eruptions and other secondary symptoms are abundant. And not only this, but at times we have appearances more closely resembling the gummata of the acquired disease.

What is the meaning of this general interstitial fibrosis, or more correctly, what is the series of changes which leads to its formation, it is difficult to state with precision. At times it appears to be wholly in excess of any development of the above-mentioned miliary gummata. Indeed, it looks as though it had not been preceded by any characteristic syphilomatous lesion, and the peculiar manner in which the connective tissue development extends between the rows of the liver cells, and becomes pericellular, and *pari passu* the liver cells show evidences of atrophy, would seem to indicate that here we are dealing with, not so much the results of the productive granulomatous inflammation, as with a process of tissue disturbance set about by the diffusion throughout the system of the toxic substance generated by the virus. These toxines lead to the atrophy of the liver cells with synchronous development of connective tissue; in short, the appearances are largely, but by no means entirely, those of a replacement fibrosis.

A somewhat similar condition is occasionally to be met with in the kidney and that in the earlier stages of the disease. The only

further point I need impress upon you here is that this generalized fibroid change may be developed in the earliest stages of the generalized disease, and by no means necessarily indicates a tertiary condition.

In some rare cases this extensive fibroid condition appears to be present with very little evidence of syphilomatous or granulomatous change in the organ. Marchand[1] has recently described and collected together about half a dozen examples of this condition. Curiously enough, this form of cirrhotic liver with atrophy in most of the cases has occurred in one of a pair of twins and that one still-born. It is also associated with evidences of profound hepatic disturbance in the shape of icterus. Marchand's cases are not wholly satisfactory so far as regards the history of syphilis in the parents, but, as he states, it is difficult to explain this remarkable condition of atrophy of the organ with extreme fibrosis, save on the supposition that the cases were syphilitic.

Coming now to the presence of gummata, Gubler noted in his earliest communications that scattered through the cirrhotic areas in the infantile liver were numerous fine paler flecks, which he likened to grains of semolina, and Virchow, studying these, spoke of them as miliary gummata. More and more evidence has accumulated as to the relationship between these minute, ill-defined tubercles or collections of small round cells, and the caseous gummata seen in the acquired disease. The relationship is identical with that between miliary tubercles in the lung, and encapsuled tubercular caseous nodules in the same. In the great majority of cases, the liver of congenital syphilis presents the admixture of a diffuse pericellular cirrhosis and scattered miliary gummata. Sometimes the whole of the organ is affected, at other times the process is observed only in parts, either at the edges or in a portion of one lobe. In this latter case one has circumscribed yellow masses sharply defined from the, in general, congested but otherwise unaffected, hepatic tissue. Sydney Coupland,[2] indeed, goes so far as to regard these circumscribed masses as enormous gummata. It is, however, open to doubt whether these masses strictly conform to our idea of gummata, although I must confess that it is difficult to define with precision what we include under this term. For myself I am inclined to regard them as more nearly resembling the large nodular syphilomata occasionally to be met with in the adult liver,

[1] Ctbl. f. Allgem. Path., Vol. VII., 1896, p. 273.

[2] Trans. Path. Soc., London, Vol. XXVII., 1876, p. 303.

where they may be so well-defined as time and again to lead to the erroneous diagnosis of non-infective neoplasms.

There are frequent cases on record in which true gummata have been recognized in the liver within a few weeks after birth. Several French cases will be found quoted by Hutinel and Hudelo[1] in 1890, while Cohn in 1896 quotes several German authorities.[2] In English literature, I have found cases described by Canton[3] (in an infant of two weeks, with numerous small gummata), Barlow[4] and Hutchinson (loc. cit.).

In Barlow's case the child showed no syphilitic symptoms until it was seven weeks old; it died five weeks later, and upon the upper surface of the liver were several depressed areas, varying in size from that of a pea to that of an almond, one having a slight tail-like prolongation; there were a few also on the under surface. As he points out, from these depressions it is clear that the gummata were, as he terms it, *receding*, although it would seem clear that they presented no central caseous change.

From the above description it would seem that in the liver of the new-born infant, presenting externally evidence of what is known as the secondary stage of the disease, there may be several varieties of syphilitic manifestations:

1. Well-defined gummata.

2. Admixture of miliary gummata, with generalized fibroid change, not affecting the whole organ but forming relatively large circumscribed areas.

3. Admixture of miliary gummata and generalized fibrosis affecting the whole organ, which is in consequence enlarged.

4. Generalized "atrophic" cirrhosis without much evidence of gummata, but associated with icterus, œdema, etc., the organ being granular and definitely contracted.

In other words all the changes seen in congenital syphilis are those which ordinarily are considered to characterize the tertiary rather than the secondary stage of the disease.

There is yet another form of congenital syphilis which has to be noted; the form termed "syphilis hereditaria tardiva" or more correctly, delayed congenital syphilis. Several examples of this delayed syphilis are on record; it is to be made out from them that frequently the cutaneous changes may not show themselves for years

[1] Arch. de Med. Experimt., 1890, Vol. II., p. 509.
[2] Virchow's Arch., Vol. 146, 1896, p. 468.
[3] Trans. Path. Soc., Vol. XIII., 1862, p. 113.
[4] Trans. Path. Soc., Vol. XVII., 1876, p. 292.

after birth. Taking up more especially the English literature upon the subject, Henry Morris[1] has described a case of a girl aged 20 with marked syphilitic family history and evidences of interstitial keratitis, who had suffered from sore throat at 12, enlargement of the liver at 18, ascites at 19, and at the autopsy, the liver was found much puckered and deeply fissured as well as altered in shape, while there were several large gummatous nodules imbedded in different parts of the organ. Wills[2] records a case that seems somewhat more definite, in which a male, aged 22, presented a small dense liver with thickened capsule, which was constricted into lobules by numerous thickened bands of connective tissue, a condition which he could only explain as being due to congenital syphilis. Bristowe descibes a condition of gummata in the liver of a boy of 15 which gave way to treatment with potassium iodide, a condition which he could only regard as an excellent example of the results of delayed congenital syphilis; and Osler, in his well known "Lectures on the Diagnosis of Abdominal Tumors," gives two cases which are similar, one of his own, the other which had been recorded by Dr. A. C. Wood in the University Medical Magazine, Vol. II. Both of these cases were in boys of 13, presenting clear evidence of congenital syphilis; in both there was the enlarged irregular liver, which diminished under the action of potassium iodide. A further case in a male, aged 22, has just been published by Post & Councilman.[3]

It is clear then that congenital syphilis, like the acquired disease, can manifest a tertiary stage long years after infancy, and that the tertiary symptoms when thus delayed are liable to be of the gummatous type with cicatricial contraction. In other words, congenital syphilis may in every respect follow a course identical with that seen in the acquired.

THE LIVER OF ACQUIRED SYPHILIS.

Passing on now to consider the syphilitic manifestations in the disease of post-natal acquirement, it is very interesting to notice that whether we are dealing with cases in which death has occurred within the first year after the disease has been communicated to the individual, or whether we obtain the liver long after the acquirement of the disease, the morbid changes are of the same order, the only recognizable difference being that the longer the time that has elapsed after infection, the greater is the tendency to the development of cicatricial changes with contraction and deformity of the organ.

[1] Trans. Path. Soc. Vol. 21, 1870, p. 214.
[2] Liverpool Medico-Chirurgical Journal, July, 1892.
[3] Boston City Hosp. Reports, 1888, p. 233.

Taking up the hepatic disorders in series, perhaps the earliest disurbance that has been noticed with common frequency is the evelopment of icterus in the early secondary stage. The association has been noticed by several writers. Hilton Fagge, writing in 1867, was able to quote Portal, Ricord, Gubler and Lancereaux upon this point, and noted that Lancereaux alone had collected 21 other descriptions of the connection, and, intermittently, observers have since described the association which is now generally recognized. The last writers upon the subject are Neumann, Joseph, and Uhlmann.

Inasmuch as patients have very rarely died in this stage, it is impossible to state with precision what is the condition, but, by analogy with what occurs in the infantile liver, it may be suggested that there is here a generalized toxic disturbance of the organ, with catarrhal hepatitis, which may or may not lead on to the generalized fibroid state, which has been described in connection with the infantile liver. Indeed, Hilton Fagge[1] has recorded a very interesting case of what he terms yellow atrophy of the liver consecutive to a diffuse change in the organ due to acquired syphilis. The case is that of a female of 23, in which there was a history of syphilitic rash with falling off of hair, and macular syphilides. Jaundice appeared to be of the obstructive nature. The patient became drowsy, then unconscious and comatose. At the autopsy, the liver weighed 46 oz., and was of an opaque bright yellow color, and of dense consistence. The surface was mottled, the left lobe resembled very closely that of the infantile syphilitic liver; it was pale and semipellucid, and the parenchyma was replaced by connective tissue; there was no amyloid reaction.

Here then we have the jaundice, associated with the generalized atrophic condition of the organ, which, in the absence of full microscopical description, may be taken to be either closely allied to the atrophic form already mentioned in the infant, or to the general pericellular fibrosis with miliary gummata seen in same. Without deciding positively to which form this case belongs, I would point out that generalized change in the organ is more common than I think is generally recognized.

The gummatous syphilitic liver is so characteristic and so well-known a form of hepatic disease that, now-a-days, it is rarely described, save from previous authorities, and thus in general, once gummata are recognized in the liver not much further interest is taken in the case; thus the old classic descriptions and ideas are perpetuated.

[1] Trans. Path. Soc., Vol. XVIII., 1867.

It is generally laid down that in tertiary syphilis affecting the liver, gummata, whether well marked and caseous, or the cicatrised remains of such with well-formed stellate surrounding of fibrous bands are the characteristic changes in the organ, while a condition of generalized and pericellular cirrhosis is wanting. It must, however, be remembered that even years after the primary infection such cirrhotic change may be recognizable, and not a few cases are on record of such a condition.

In three out of eight cases of tertiary syphilis affecting the liver, which have come to the post-mortem room at the Royal Victoria Hospital during the past four years, there was clear and fairly extensive pericellular fibrosis along with gummatous change. The fibrosis, it is true, was not generalized over the whole liver, the condition more nearly resembled a condition of circumscribed fibroid change seen in the infantile liver.

These three cases are of some interest as throwing light upon the hepatic changes. In one case there was no clear history given of the date of infection.

Case 1.—Male, æt. 35. The patient became anæmic and emaciated in April, 1895, œdema and ascites supervening, and death occurred early in July. There was albuminuria, and the œdema of the legs had been complicated with an erysipelatous condition which seems to have been directly caused by the hepatic disturbance, for the heart was fairly normal, and the kidneys, although large and white, showed scarce any sign of interstitial change. The liver showed numerous large deep stellate cicatrices with some diaphragmatic adhesions. The organ in general was soft with advanced fatty nutmeg condition. Sections through the cicatrices showed a characteristic gummatous appearance, with large bands of fibrous tissue running deeply. Microscopically, there was a considerable amount of pericellular cirrhosis in the neighborhood of the gummata with much small-celled infiltration. The spleen was large, firm and congested. The stomach presented diffuse submucous hæmorrhages.

I shall return later to consider this condition of small-celled infiltration. Case 5, to be referred to later, showed a similar condition.

In another patient of Dr. J. Stewart the condition was more widespread.

Case 2. The patient, aged about thirty-seven, was infected fourteen years before his death, and, although himself a medical man, had never undergone proper antisyphilitic treatment on account of

the intense gastric disturbance induced by mercury and potassium iodide. Four years after infection he suffered from gastritis and diarrhœa, alternating with constipation and a condition of gastric disturbance and general malaise, which continued at intervals for the rest of his life. It is to be noticed that there was a frequent development of a febrile temperature. Ascites and jaundice supervening in the middle of October he was tapped; the fluid collected again, and he died in the beginning of November.

At the autopsy, there was no sign of old ulceration or chancre; there was well-marked jaundice; the heart was healthy in appearance, though there was moderate atheroma of the aorta. There were dense bands of adhesions between the diaphragm and the abdominal wall, and the liver was profoundly contracted and small, scarcely passing beyond the middle line. It had a puckered and coarsely nodular surface. The right lobe was especially contracted, presenting frequent and well-marked gummata with surrounding cicatrices so that the surface was broken up into numerous small nodules of the large hobnailed type. On section there were numerous white gummata from two to four mm. in diameter scattered through the liver substance, and, in addition, there were relatively large areas of fibrosis here and there throughout the organ. The spleen was large, turgid, and smooth, weighing 570 grammes.

Upon microscopical examination the organ showed well-formed caseous gummata with a zone of surrounding congestion, together with a very general advanced interstitial fibrosis, somewhat irregularly distributed, in addition to the ordinary fibroid bands of tertiary syphilis. The bile capillaries were richly injected with inspissated bile, and the kidney showed a condition of parenchymatous nephritis.

The interest in this is, that here we have presented to us a progressive syphilitic disturbance not arrested to any extent by specific treatment. The amount of change in the liver was extreme, and, as above mentioned, consisted in the development of numerous gummata, pericellular fibrosis and catarrhal hepatatis, with jaundice. Indeed we have here an example of syphilitic infection of the liver in an active stage fourteen years after primary infection. The appearance of the liver in this case appears to throw light upon what is the true nature of so-called tertiary syphilis. This is not by any means a receding process. While the tendency of the disease is, as it were, to burn itself out, and while in the majority of cases, if properly treated, the virus is completely destroyed in the secondary stage, nevertheless there may be persistence of the virus, and under

favorable conditions the disease may light up again. Here, in this case, the patient enjoyed very fair health from 1888 to 1893. Gastric and intestinal functions were well performed; he increased in weight, and led an active life. During this time the process was certainly arrested, then the malaise and indigestion returned, and the ascites and jaundice which supervened can only be ascribed to the progressive development of syphilitic disturbance in the liver.

The analogy between syphilis and tuberculosis in this respect is perfect. In about 30 per cent. of our autopsies we come upon evidences of old tubercular cicatrices in the lungs, and in the majority of these cases the process is undoubtedly wholly arrested; thus we are dealing with healed tuberculosis. In some, however, we see that the virus is still present in the encapsuled caseous masses, for we can in a certain number of cases cause the disease in guinea pigs by inoculating into them the caseous contents of the old tubercles, and again in some cases we can recognize that these tubercles have been obsolescent and not obsolete, for around them we can make out progressive tuberculosis evidently originating from them. Speaking of these cases in the language which we employ to syphilis, we might describe them as being examples of tertiary tuberculosis, or, to put it otherwise, we include under the term tertiary syphilis two conditions:

1. The cicatrices and fibroid changes which are indications of a previous syphilis now healed and obsolete.

2. The lighting up again of an obsolescent syphilis from old foci in which the virus has remained latent.

The two cases just recorded are examples of the latter condition, while the case which follows is one of several examples of the former.

CASE 3. Male, æt. 49, who had led a wandering life in the South American States, Pacific Islands, and over the world since twenty-five. He had suffered from all the diseases of childhood, gonorrhœa at eighteen, stricture five years later, yellow fever while serving in an American army, small-pox and malaria when he was nineteen, had chronic dysentery about six years ago, was a heavy drinker of spirits, and had been a soldier, a sailor, and of late a backwoodsman; he denied having had a chancre. The cause of death was acute lobar pneumonia of the upper lobe of the right lung with purulent peritonitis.

(Continued in next issue.)

VICARIOUS URINATION (?).*

By A. T. Rice, M.D.,
Woodstock.

The case, the history of which I wish to bring before you to day, is of such a unique character that, for a better name, I have appended to it that of Vicarious Urination.

I trust that subsequent discussion by the members present will help to solve what, to myself and other medical gentlemen who saw the case, was somewhat of a mystery.

The patient, æt. 30, daughter of a farmer, of a somewhat nervous temperament and rather weak intellect, was attacked about three years ago with cystitis of two or three weeks' duration, the attack being somewhat severe, there being complete atony of the bladder, necessitating the use of the catheter during that period.

This attack gradually subsided, though considerable tenderness remained, lasting even up to the present time.

One year after this attack she was again laid up with what this time took the form of involuntary twitchings, or spasms, of the whole body, emanating from the dorsal region, over which portion of the spine there was a good deal of tenderness. These spasms were so severe as to confine her to bed for some weeks.

Accompanying this attack there were a number of discolorations of the right leg and thigh extending almost entirely over the limb, but without tenderness. This, after a few weeks, gradually disappeared, and the patient regained her ordinary health.

About one year ago the atony of the bladder returned, and the patient was again obliged to resort to the use of the catheter three times a day, about half an ounce being drawn each time.

During this time her general health suffered severely, the bowels being extremely constipated, appetite poor, mucous patches in the mouth, and breath foul.

*Read before the Ontario Medical Association, June, 1898.

No amount of treatment seemed to have the slightest effect upon these abnormal conditions.

The twitchings or spasms also returned and continued throughout.

About the first of August the feet began to swell slightly, though not sufficient to incommode her to any extent.

At this time a peculiar complication set in, and the main one to which I wish to call your attention.

The secretion of the bladder gradually diminished, but was compensated for by an exudation of fluid from the anterior portions of lower limbs between the knee and ankle. This fluid was voided regularly three times a day, the amount gradually increasing, the average being about thirty to forty ounces per day.

The fluid simply oozed from the skin without any abrasion of the skin or discoloration, or even the slightest œdema being present.

The patient would realize that the fluid was about to begin, and would place her feet upon a stool and a dish beneath the heels.

I happened to be present at one time when it began, and can therefore vouch for the correctness of the statement.

The fluid was of an amber color similar to healthy urine, sp. gr. 1010, an absence of albumen or sugar, had a strong smell of urine upon boiling, with a distinct ammoniacal smell after standing. Examination also showed the presence of uric acid.

After this sympton showed itself the patient's health rapidly improved and became fairly well established, so that she had little to complain of except the inconvenience caused by this peculiar phenomenon.

From my note-book I have taken the following data:

Sept. 21st, 1897. The patient passed three quarts to-day by measurement.

Sept. 23rd. Patient passed seventy ounces this morning at one sitting. This condition until Oct. 2nd, when the patient passed one gallon in half an hour in the morning, followed by one pint at 11 a.m., when it suddenly ceased altogether and began to pass through the urethra, first in small quantities every few minutes, followed by five to six quarts the first night. After this the natural condition gradually became established, but the patient became again very ill, the spasms reappeared, accompanied by headache, swelling of feet, and great swelling of the face.

This condition remained for about a week, when the symptoms gradually disappeared and the patient regained her usual health, which has continued until the present time.

I might say that, during the last two weeks, when the flow was excessive from the shins, the bladder remained quite empty, and the use of the catheter was stopped, as no urine could be obtained at any time.

Question. What was this? Was it vicarious urination? If so, how is it to be explained? Through what channel did it travel? What was the pathological condition?

The fluid certainly stood all the tests for urine, resembled urine, and its elimination from the system through this peculiar channel permitted the patient to live.

Dr. Mearns saw the patient in consultation with me, and I have explained the case to a number of gentlemen, but all are equally at sea with myself.

I wrote a history of the case to Prof. Guiteras, Genito-Urinary Surgeon of New York Post-Graduate School, who took a great interest in the case, but stated that he had never heard of a similar one.

The only one bearing any resemblance to this was one that occurred in the practice of Dr. Clement, of Woodstock.

This occurred in an old lady, in which each winter for six years the secretion of the bladder stopped, and all of the urine exuded through the skin in the form of perspiration. The patient died after the sixth year.

The foregoing is a plain statement of what to me was a unique case, which baffled me from first to last, both as to diagnosis and treatment, and I hope that in the discussion to follow some gentleman may be able to throw light upon a peculiar phenomenon, or will we be obliged to admit that some of the vagaries of the human system are past our finding out?

Selected Articles.

A CONTRIBUTION TO THE STUDY OF HYSTERIA IN THE MALE.

By Dr. Silvio Ciarrocca.
(University of Naples.)

HYSTERIA is not, as was formerly believed, a disease of the female organism exclusively.

Sydenham, as early as 1799, was acquainted with hysteria in the male; he was, moreover, one of the first to oppose the theory that the uterus was the pivot around which revolve all the manifestations of the neurosis. Briquet, in his treatise (1859) which opened the really scientific period in the history of hysteria, speaks also with much precision of this affection in the male; but the fact was made quite clear by the researches of Charcot, who, by his observations on hystero-traumatism (which his contemporaries had not known or had overlooked), enlarged more than ever the domain of the neurosis, studied by him with so much zeal.

The subject thus passed, I might say, to the order of the day, and works upon it multiplied. Among them I wish to mention those of Batault (1885), who had under observation 218 hysterical men, and those of Michaut (1890), who has shown that hysteria in the male is very frequent, and that it seems to become more so as we learn how to recognize it in the various forms which it assumes. A similar statement is made by P. Marie (1889), who, in his statistical study made at the central office for admission to the hospitals of Paris, says that "great hysteria," that in which the disorders of the sensibility are accentuated, has been observed by him with greater frequency in men than in women, while "common hysteria" is more common in the latter. He remarks also that the majority of the cases belong to the lower ranks of society, especially in the country districts. Charcot, in 1883, observed that the disease draws most victims from the laboring class, from vigor-

ous, robust people, engaged in heavy and protracted physical labor.

The proportion, however, between female and male subjects suffering from hysteria, varies according to different authorities; so that, while Briquet calculates the proportion as twenty to one, Pitres (1891) gives that of two to one. I believe that this great difference in figures depends on the fact that, at the time when Briquet made his observations, male hysteria had been little studied and was diagnosed only in those cases in which it showed itself by quite evident symptoms. In a year that I have spent in the clinic of Prof. Bianchi, out of many hundreds of patients, I have seen only two hysterical men, but many hysterical women, but I am inclined to think that Pitres' ratio is less than it should be. And the reason thereof we must look for, not in the sexual difference of the two organisms, but in the different resisting power of the system in general and of the nervous system in particular. What is, however, more important is the identity of the circumstances under which the hysterical diathesis, as the French call it, reveals iself in the two sexes, and the identity of the manifestations. As in the woman, so also in the man, hysteria appears most frequently at puberty, although there have been described cases of this neurosis in children (Goldspiegel) and in old people (de Fleury). Yet, according to some authorities, male hysteria would present some characteristic feature. The influence of heredity, for example, would be more manifest in hysterical men than in women; of thirty-one patients, observed by Batault, twenty-six belonged indisputably by their antecedents to the neuropathic family, and Bitot (1890) writes that, out of twenty-two cases examined by him, heredity was quite clear in eighteen, who came from ancestors that had suffered from the most different nervous diseases. In the manifestations of hysteria in man, moreover, there would be seen a certain fixity, which may last a long time and thus give rise to some doubt as to the diagnosis and prognosis (Charcot). Very often in the cases of male hysteria there would occur the association of this neurosis with neurasthenia: Bodenstein indeed has observed in four years one thousand two hundred and twenty-four cases of hysteria, of which one hundred and twenty-two were in men of different professions and trades, and in them he noted both hysterical and purely neurasthenic symptoms.

If I have thought the following case worthy of notice, it is not because of the appearance of the hysterical manifestations in a male; but because they present particular groupings from which considerations of a general character arise.

Errichiello G., of Antimo, unmarried, unable to read or write. His mother was very nervous, and for some time has been subject to convulsions, which depend especially on anger or fear. Two brothers died of convulsions, a younger sister of measles. At a tender age he often got a decoction of poppy to procure sleep. At the age of thirteen years he had typhoid, lasting for more than two months. At this time began the symptoms which the patient refers to his nerves and head. Sleep was often disturbed by bad dreams; often awoke with a start. After some time there was added a diffuse headache, in the exacerbations of which he experienced a horrible sensation as of pins entering his brain. As a result of these sufferings there ensued a change in his disposition, so that, being apprenticed to a shoemaker to learn that trade, he was dismissed for his inattention and neglect. At home he showed himself capricious, often disobeyed his mother, and every now and then gave himself up to incomprehensible soliloquies. Profiting by the little he had learned, he began to mend old shoes, working along the public road in the neighborhood of Naples. In this wandering life he began to use wine to excess, and practised onanism. Three years ago, during the night, while tormented by a troublesome cough, without other cause, he had a convulsive attack, preceded by a feeling of nausea, pain in the stomach, constriction of the throat, and not followed by a loss of consciousness. After that there followed a period of relative calm up to last September, when one evening the patient, without apparent cause, had a convulsive attack similar to the first. From that time the convulsions were repeated more frequently, at longer or shorter intervals; the last attack, in December, being the most violent. In this attack Errichiello bit his father who was trying to restrain him. After some days' rest he wished to again start out on one of his trips. His father accompanied him, fearing some accident. Indeed, while he was working one day the poor fellow tried to cut his throat with one of his tools, but was prevented and brought to the asylum the 9th January, 1897.

Present condition.—Normal development, good state of nutrition. Ears unequal and placed at different levels. Normal development of the genital organs; these are deeply pigmented. The interdigital space between the fourth and fifth fingers of the hands is much greater than normal.

He cannot stand on one foot with his eyes closed. His gait is awkward; the flexion of the knee is greater than normal. His speech is slow, whimpering; every now and then he stutters, which is not at all congenital, according to the father. In the field of the

special senses we note a considerable bilateral concentric narrowing of the field of vision. The perception of colors is disturbed. The tendon-reflexes are normal.

Psychical examination.—He knows he is in the asylum and thinks that his father accompanied him here to cure him of a disease of the nerves from which he has suffered since childhood and which has caused displeasure to his parents. Asked about the attempted suicide, he replies: "You must know it is not I, it is my head. That beast, the devil, entered my brain and ordered me to kill myself." He has some difficulty in collecting his thoughts at times. (Then follows a detailed account of his condition at various times up to October 18th.)

It is not my intention to discuss this case diagnostically; such a discussion would have a purely scholastic interest. I shall observe in the first place how far the hereditary influence is apparent in our patient. Direct heredity is frequent in hysteria, and, according to Briquet, half the hysterical mothers give birth to hysterical children. Liability to convulsions is one of the nervous manifestations most frequently transmitted to offspring (Féré), and the Errichiello family is a classical example of this, as, of three sons, two died at a tender age of convulsions, and the third is hysterical. In him the neurosis, latent up to the age of 13 years, reveals itself after an infection. The part which infections play in the production of the neuroses is certainly important, but I believe that their effects are subordinate, at least in the greater number of cases, to the individual predisposition. Grasset (1896) and Marie uphold the theory that general diseases, especially the infectious, determine, in and of themselves, the affections of the nervous system, including hysteria. If it were so, ought not every febrile delirium to assume a special form for every infectious disease; and in the organic diseases of the nervous centres would we not meet a constant relation between the agents of infection and the established anatomical lesions? Now clinical observation teaches us that febrile psychoses, the deliriums of convalesence, have a very great uniformity, whatever be the causal infection, and that hysteria, consecutive to the most varied infectious diseases and to the most varied poisonings, has no specific feature peculiar to the causative agent. Therefore it is more logical to admit that all these causes act by weakening the nervous system, so as to disturb that merely apparent equilibrium which depends on the neuropathic predisposition.—*Translated from Giornale Internazionale delle Scienze Mediche for the* CANADIAN PRACTITIONER *by* DR. HARLEY SMITH.

(*To be Continued.*)

Clinical Notes.

CLINICAL NOTES ON ABDOMINAL SURGERY—APPENDICECTOMY.

By James F. W. Ross, M.D. Tor.,

Professor of Gynæcology, University of Toronto; Professor of Gynæcology and Abdominal Surgery, Woman's Medical College; Surgeon to St. John's Hospital, Toronto General Hospital, and St. Michael's Hospital.

FOLLOWING up some clinical notes published in the May number of The Practitioner, it may be of interest to some of your readers to continue the report of some of my recent experiences with disease of the vermiform appendix. The most recent experience strongly emphasizes the view I have already expressed, that if I myself were taken with sudden severe pain in the abdomen, vomiting, tenderness on pressure in the right iliac region, and rigidity of the right rectus muscle, I should ask a surgeon to open my abdomen.

H.F., æt. 26. Was taken with pain in the abdomen on a Monday morning. He took a seidlitz powder, and went to business. All day he felt uncomfortable, and was half doubled with colic. On Monday evening the pain grew worse, and vomiting set in. He sent for his physician, who is a recent graduate, and is imbued with ideas coinciding with my own. Morphia was given to ease the pain. The temperature became elevated to about 100, and the pulse remained about 70. On Tuesday morning he was again seen. Tenderness on pressure was made out in the right iliac region, and there was board-like rigidity of the right rectus muscle. On Wednesday morning I was called to see him in consultation. He had a pinched expression of countenance that was noticed by his wife and by the physician in charge and by myself. He laughed and chatted as if there was not much the matter with him. He said he scarcely considered the consultation necessary. His pulse was 70, temperature 99. There was no distension. The four cardinal symptoms, on which I have so frequently relied, were present, and I told him

that I was satisfied he was safer with his abdomen open than with it closed. He decided to have operation performed at once.

Two nurses were immediately sent to the house, preparations made, and in four hours his abdomen was opened. A large, fluid-filled, inflamed and partially gangrenous appendix was drawn up and removed without difficulty. One patch of lymph, being pushed aside, disclosed beneath a black, gangrenous area, about the size of a five-cent piece, ripe and ready to give way. The convalesence was uneventful.

By such early operation all but a small percentage of doubt as to future progress of the case was eliminated. The probability of death was very much diminished, and a prolonged convalescence and abscess formation were set aside.

In contra-distinction to this, another case, that of Miss C., may be mentioned. Patient took ill on May 10th with sudden pain in the abdomen. Managed to reach home; suffered a good deal of pain on the way. Had severe vomiting. Her physician was called, and found her complaining of tenderness across the abdomen, above the navel. Gradually great tenderness developed in the right loin. Temperature slightly elevated; pulse became gradually increased until, when I saw her, it had reached 120 per minute. The abdomen was considerably distended. I advised immediate operation, although I feared that already the peritoneal cavity had become generally infected. From the point of the greatest pain I concluded the appendix was high up, and back in the loin. Dullness on percussion was made out in the right loin.

Abdomen was opened to the right of the right rectus muscle. The general cavity was packed off carefully with gauze. Gangrenous, thickened appendix was found with the tip adherent to the under surface of the liver. Appendix was enormously swollen and lay behind in the loin. An abscess cavity was found that contained about a wine-glass and a half of horrible smelling pus. After a great deal of difficulty the appendix was peeled off from its bed and removed. Operation consumed considerable time owing to the friable condition of the gangrenous parts. Gauze was packed into the cavity from which the appendix had been removed. Rubber drainage tube placed.

The patient was slightly jaundiced at the time of operation and became intensely jaundiced shortly after. The pulse became slow, coma set in, and she died from cholemia. Had not the appendix been adherent to the under surface of the liver this acute hepatitis might have been avoided.

The case demonstrates the fact that we cannot tell where the vermiform appendix is situated, and, further, that the situation of the appendix affects to a certain extent the prognosis of the case. Had this appendix been removed within twenty four or forty-eight hours of the commencement of the attack, who can say that the result would not have been different? The patient and her friends were very much opposed to surgical interference.

Miss L., æt. 18. Two severe attacks. An interval operation. A very long appendix found, seven or eight inches in length. Removed in the usual way. An easy convalescence.

Mr. E. M., æt. 20. Three severe attacks. Almost lost his life in the last one. Interval operation. Appendix bound down firmly by adhesions, completely doubled on itself. An easy convalescence.

Mr. L. had four severe attacks. Never regained his health from the third to the fourth attack, Operation done after the convalescence of the fourth attack had subsided. Appendix found in the pelvis and peeled out, as if it had been a pus tube, from a bed consisting of septically infiltrated peritoneum and intestines. A great deal of difficulty was experienced in peeling out the appendix. It was thickened, friable, and the fat in the meso appendix grey and œdematous. The muscular and serous coats of the ilium at one place were torn through during the process of separation. They were repaired by suture. Appendix removed in the usual way. An easy convalescence.

J. T. W., æt. 19. Three attacks, first two slight and last one almost fatal. Operation performed just after the subsidence of the last attack. Found considerable fluid in the peritoneal cavity; appendix running down into the pelvis. It was peeled out with a great deal of difficulty and its tip was found connected with a perforation of the rectum. This was pulled off and the hole in the rectum closed with mattress sutures. Appendix removed in the usual way. Patient made a fairly easy convalescence.

One lesson was taught by this case, namely, that in every case in which the appendix is firmly adherent to intestine, the intestine should invariably be drawn into the wound and inspected to avoid overlooking a perforation. If this had not been done in this case the patient would, in all probability, have died. I am satisfied that the existence of such perforations is a frequent cause of death after the removal of the pus tubes.

Within one week I saw two boys, one in a hospital where he had been ill for eight days, but had been doing well until the eighth day

when he was suddenly seized with symptoms of collapse. When I saw him his pulse was 160, temperature subnormal. I declined to operate, and he died that night. The other boy was thirteen years of age, and had been ill for one week. His symptoms were plainly those of inflammation and probably gangrene of the appendix. On the seventh or eighth day he was suddenly taken, through the early hours of the morning, with pain, and when I saw him, a few hours later, his pulse was imperceptible and his temperature subnormal. He died shortly after, making two deaths seen in one week occurring from perforation of the vermiform appendix.

On the four cardinal symptoms, that I have had printed in large letters below, I have frequently operated, and have never yet failed to find a large, inflamed, and thickened appendix, with gangrene either general or in patches, or a perforation into the mesentery, and a breaking down of the fat in that situation.

(1) SUDDEN SEVERE PAIN IN THE ABDOMEN.

(2) VOMITING.

(3) TENDERNESS ON PRESSURE OVER A DEFINITE POINT IN THE HYPOGASTRIC, UMBILICAL, RIGHT ILIAC, OR RIGHT LUMBAR REGIONS.

(4) RIGIDITY OF THE RIGHT RECTUS MUSCLE.

These are the symptoms of gangrenous inflammation of the appendix. The pinched appearance of the face is very marked in many of these cases. I care nothing for temperature or pulse; they are misleading, and only become affected at a later stage of the disease.

DERMOID TUMOR PERFORATING INTO THE BLADDER. ELECTRICAL CYSTOSCOPY. VAGINAL CYSTOTOMY. ABDOMINAL SECTION.

Mrs. B. Patient had a severe illness eight years ago; illness was obscure. Inflammation of the bladder set in, and hair was passed with the urine from time to time. She was seen by numerous physicians and surgeons, who advised against any operative interference owing to her weak condition.

I saw her first in May in my office, and inspected the bladder with the electrical cystoscope. A stone could be seen lying at the base of the bladder, and from its surface a large number of hairs, encrusted with phosphates, could be readily discerned. Hair could also be seen entering a perforation on the posterior part of the fundus of the bladder to the right side. A few days after a vaginal cystotomy was performed, the stone removed, together with a large quantity of hair and pieces of phosphatic concretions. In the centre of each of these little concretions a piece of broken hair was found. Two weeks after the abdomen was opened, and a small

dermoid tumour was peeled out from the right side and separated from its adhesions to the bladder. A hole in the bladder wall, about the size a five-cent piece, was closed by sutures. For fear that any extravasation of urine might occur, gauze was carefully packed around the opening, and a drainage tube placed in the cul-de-sac of Douglas. Fearing that the drainage might not be perfect through the opening into the bladder below, a self-retaining catheter was passed through the urethra. Notwithstanding the fact that these precautions were taken the wound in the bladder did not heal by first intention, and urine escaped on to the protecting gauze, and came up through the drainage tube. The patient is making, however, an uneventful recovery.

This case proves, to my mind, that suprapubic lithotomy may be performed and the opening into the bladder made through the peritoneal cavity without endangering life to any great extent. If iodoform gauze is packed carefully around and a drainage tube inserted down through the centre of it, and a self-retaining catheter kept in the bladder and frequently changed, to prevent blocking, no extravasation of urine can take place that will prove fatal to the patient.

Cholecystenterostomy. Anastomosis with the Murphy Button.

Miss S.R., æt. thirty. Patient has been suffering from cholemia for two years. The absence of attacks of severe pain pointed to a diagnosis of growth in the common bile duct, or to simple stricture of the common bile duct, rather than to the impaction of a stone. The abdomen was opened below the costal margin, a small growth was found extending up the common bile duct and reaching as high as the junction of the hepatic and the cystic ducts. The mass was soft and elastic. The liver looked in a healthy condition. One portion of the Murphy button was placed in the gall-bladder and the other portion placed in the small intestine and the two were joined together. Care was taken to protect the parts in the neighborhood from contamination. The patient made an uneventful recovery from the operation, but a certain amount of jaundice still continues. The button passed on the sixteenth day.

In all these cases I placed long loops of thread attached to the intestinal side of the button in the intestine. The traction on these threads, produced by the flow of fecal matter over and around them, prevents the dropping back of the button into the gall-bladder, and the *first evidence of the presence of the button at the rectum is given by the extrusion of these threads during defecation.*

Mr. B., æt. sixty-nine. Suffered for twenty-five years with gall-stones, and has been jaundiced two years. Notwithstanding his advanced age I advised operation. A diagnosis was made of obstruction of the common bile duct by stone. The abdomen was opened below the costal margin on the right side, and the omentum found firmly adherent to the under surface of the liver. This was peeled off and the gall-bladder gradually brought into view. It was found to be contracted and thickened. A stone was felt in the duct and was "milked" up with the finger and brought out through an opening in the gall-bladder. Two stones were removed in this way after they were broken up by needling. A needle was passed into them much as we pass it into a piece of ice when we desire to split it up into small pieces. The stones cracked readily. Fearing that the duct might not be, or remain, pervious, I concluded to anastomose the gall-bladder with the colon.

I have already reported one case of anastomosis made between the gall-bladder and the *colon*, in which the stone was *left* in the common bile duct. In that case the patient suffered no inconvenience from the loss of bile from the small intestine, and has remained in perfect health since the operation, now three years ago.

To complete the anastomosis with the large intestine, in the case under consideration, was a difficult matter owing to the extensive adhesions present. One portion of the button was placed in the large intestine. After several unsuccessful attempts the two portions were finally approximated and locked. The patient is making an easy recovery. The jaundice is rapidly disappearing, and no doubt the button will make its appearance in a few days.

Progress of Medicine.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto. Obstetrician to the Toronto General Hospital

AND

H. T. MACHELL, M.D.,

Surgeon St. John's Hospital and Physician to Victoria Hospital for Sick Children.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children and St. John's Hospital.

PAINFUL MENSTRUATION—CAUSES AND TREATMENT.

In reviewing the subject, Lawrence (*Int. Jour. of Surg.*, Vol. X., No. 30) presents the following conclusions :

1. Painful menstruation is not a disease, but merely a symptom found in various pelvic diseases.

2. Those classifications which place it as a disease are misleading and should be discarded.

3. The physiology of menstruation, a thorough knowledge of pelvic pathology, and a broad, careful habit of study and thorough case-taking, are necessary in order that menstrual pain be rightly construed.

4. Many of the cases, due to the uterus, tubes, or ovaries, may be cured in the early stages by simple means, whereas neglect places them in a position demanding serious operative treatment.

5. Painful menstruation in a sterile patient is strong evidence that there is tubal inflammation with occlusion of tubes.

6. Operative procedures should be reserved for those cases in which there is a positive pathological indication; neurotic and anemic cases being treated by other and more appropriate measures.

7. As a symptom menstrual pain is often of such grave import that it should always receive the most painstaking study. If this be

the rule, many a case will be cured without operation.—*Amer. Med. Surg. Bulletin.*

Dysmenorrhea

Dr. H. Talley states (*Phil. Polyclinic*) that a mixture of caffein, potassium bromide, and tincture gelsemium is of much value in the treatment of dysmenorrhea. This should be administered for a few days before menstruation.

The Physiology of the Puerperium.

Brutzer has carefully studied the material of the Breslau Maternity Hospital to decide the question whether prolonged rest in bed exerts a favorable or unfavorable influence upon the health and well-being of the woman. He examined the 974 cases as to pulse, temperature, general condition, and involution of the genitals, and concluded that prolonged rest in bed is not desirable. He recommends that the puerpera should leave bed about the fifth day, contra-indications, of course, being absent.—*American Journal of Obstetrics.*

Jardine, in discussing aseptic midwifery, contends that antepartum douching is necessary if there is any purulent or putrid discharge from the cervix or vagina, or if any operation is to be performed, as high application of the forceps or turning. Post-partum douching is needed in cases of post-partum hemorrhage; when the labor has been prolonged; when the hands or instruments have been introduced into the uterus; if the fœtus be putrid; if there has been any purulent discharge, or if the parts have been lacerated to any extent.

Vomiting of Pregnancy Treated by Oxygenated Water.

Gallois and Bonnel (*Bull. Gén. de Thérap.*, March 23, 1898) reported to the Société de Thérapeutique the results of this treatment. Hayem and Pinard had advised inhalations of oxygen for the same purpose; but, as the oxygen could not always be procured in gaseous form, they tried water containing ten or more volumes of oxygen gas (peroxide of hydrogen, H_2O_2). They administered a tablespoonful in a litre of water, given with wine and drunk during meals. They note that two tablespoonfuls of oxygenated water to the litre leads to an unpleasant metallic taste. They do not think the cure results from suggestion, because it did not follow when the dose employed was a teaspoonful to the litre. As a rule,

cure is complete in two or three days. Vomiting due to gastric disease is not improved, nor has the treatment any effect on heartburn. In pure cases of vomiting of pregnancy they had only two failures. The method was also tried with success in the vomiting of phthisis. —*British Medical Journal.*

Passage of Substances from Fœtus to Mother.

Lannois and Brian (*Gaz. Hebdom. de Méd. et Chir.*, March 3, 1898), having had under observation a patient with grave symptoms of albuminuric origin, in whose case the symptoms suddenly disappeared on the death of the fœtus, though the latter was not expelled till seventeen days later, made some experimental inquiries, from which they concluded: (1) That substances (such as salicylate of soda, iodide of potassium, and methylene blue), injected into the fœtus, pass through the placenta, and can be detected in the tissues and urine of the mother. (2) This experimental fact supports the view already advocated by Lannois, that normal excretory products of the fœtus pass through the placenta to be eliminated by the maternal organism. (3) In cases of renal insufficiency these waste products of fœtal life can therefore, in part, contribute to the maternal auto-intoxication, and consequently can play a part in eclampsia and other accidents associated with the albuminuria of pregnancy.

Puerperal Infection.

(*a*) Contact of the physician or nurse is the most frequent cause; (*b*) make as few vaginal examinations as possible in obstetric practice; (*c*) omit the ante- and post-partum douche as routine practice; (*d*) at the first appearance of puerperal sepsis give the parturicus canal one thorough disinfection; (*e*) be sure not to overlook localized pelvic inflammation which may require a major operation; (*f*) use stimulants fearlessly, employ injections of normal salt solution, under the skin, into the rectum and intravenously, and try the administration of nuclein; (*g*) before employing an antistreptococcic serum be sure that you have to deal with a pure streptococcus infection. R. C. Norris.

The most constant and earliest symptom are elevations of temperature, rapid pulse and relative or absolute insomnia.

Ferre.

For the occurrence of sepsis in child-bed the attending physician must usually hold himself to blame. Practically all causes of infection are within control, and puerperal sepsis is a preventible disease. Chas. Jewett.

DANGER OF DELAY.

In seven cases of cancer, in which the disease was of more than six months' duration before operation, none were alive two years after operation. In seven cases, where the disease was of six months' or less duration before operation, six were alive two years afterward.

CHAS. A. L. REED.

The introduction of the hand into the uterus after labor is a risk to be avoided if possible. Even fragments of membrane which are wholly within the uterus are better left to be cast off spontaneously. (We have not for many years forcibly pulled upon a strip or piece of membrane, either not yet separated or held by uterine spasm. Our rule has been to tie a thread around it where it protrudes through the vulva, and ask the nurse to pay particular attention to it. It is usually cast off in one day—always within two. ED.). CHAS. JEWETT.

Every obstetrical case should be considered a surgical one. If there is any difference between the two, it is that the obstetrical case should require a more *rigid* antisepsis than the surgical one.

A. F. A. KING.

That bane of past gynæcological history, the ruthless and unnecessary sacrifice of useful generative organs, has been, and doubtless will be, more perfectly remedied as more scientific and conscientious endeavor on the part of the physician to make accurate diagnosis gains ground. At the same time, and for the same reason, the exploratory incision is rapidly becoming comparatively a thing of the past. YEATMAN WARDLOW.

Since the spring of 1895 I have invariably made an effort to retain the ovaries even in those cases under my care in which it has been necessary to remove the uterine tubes and the uterus. The result of this has been a remarkable diminution, and in some cases complete absence of the distressing nervous symptoms of the menopause. HOWARD A. KELLY.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF

PRICE-BROWN, M.D.,

Laryngologist to Western Hospital; Laryngologist to Protestant Orphans' Home.

Control of Nasal Hæmorrhage.

E. B. Gleason (*Laryngoscope*, March, 1898) describes two methods of controlling nasal hæmorrhage, which he has practised successfully, the object being to occlude the posterior naris without the use of Beloeg's snare. In the first he takes a long slip of muslin, 18x1½ inches. This is soaked in cosmolin or albolin and folded about three inches from one end over a probe, and pushed through the nostril into the posterior naris—the short end next the septum. The long end is again folded near the ala and pushed into the sac just formed, and the packing deeply repeated until the bleeding cavity is filled. When the gauze requires to be removed gentle traction upon the free end will gradually draw out fold after fold without producing irritation.

The other method is by taking a large, loose piece of absorbent cotton, soaking it in a fifteen volume solution of peroxide of hydrogen and pressing it through the inferior meatus to the posterior naris, as in the first method. If necessary, smaller pledgets of cotton, dipped in the peroxide, could be packed in front of the larger piece. The packing in either case should not be removed inside of twenty-four hours, and then, if necessary, removed.

Cysts of the Floor of the Nose.

Brown Kelly (*Jour. Laryn. Rhin. and Otol.*, June 1898) adds a report of three more to the very small number of cases of cysts of the floor of the nose, which have so far been recorded. As no full account of the affection has heretofore been published Kelly, together with the history of his cases, gives a sketch of the disease.

It always occurs in females. At any rate, the twelve cases up to the present time reported have all appeared in women, the ages being between nineteen and fifty-eight years. The site of formation, likewise, is always the same, being the outer floor of the nostril, anterior to the inferior turbinated body, and just behind the union of the skin with the nasal mucous membrane. The appearances within the nose vary only in degree. When the cyst is small it forms a grayish hemispherical eminence about the middle or outer half of the floor of the nose. As the sac enlarges it extends backwards and also downwards into the incisor fossa, but very rarely toward the septum.

The views as to etiology are largely speculative; but it has usually been considered as the development of a retention cyst, probably the result of inflammatory action.

As to treatment, when the cyst is small, incision or aspiration, with or without the injection of an irritant, will suffice. If the discharge continues the application of caustics or the destruction of the living membrane of the cavity by galvano-cautery may be called for. When the cyst becomes large, its excision from the gingio-labial fold would be required to produce a cure. In two of the cases reported by Brown Kelly, simple incision was all that was required. In the third, incision was followed by return, and the cyst was eventually excised.

Suppurative Frontal Sinusitis Treated by the Ogston-Luc Operation.

Gordon King (*Annals of Otol. Rhin. and Laryn.*, Feb. 1898), after giving a resumé of the symptoms and diagnosis of the various forms of sinusitis from each other, lays stress upon the advantages of the Ogston-Luc method of operation above all others in cases of frontal disease.

The technique is simple. After having shaved the eyebrow, and rendered the field of operation as aseptic as possible, the first incision may be made in two ways. By Ogston's method an incision is made along the inner third of the orbital arch, just below the supra-orbital ridge, and extended to the distance of a centimetre obliquely downward along the root of the nose. By Luc's method a straight horizontal incision is made along the inner third to the median line. From this point a vertical incision is carried down to

the root of the nose. This method is adopted in order to reach both frontal sinuses if necessary. In either case the incisions are carried down to the bone, the bleeding points ligated, and the periosteum detached and retracted to expose the bony wall of the sinus. The opening into the bone may be made by electric drill, crown-trephine or gouge and mallet. The opening should be about the size of a ten cent piece, or large enough to admit of free illumination by reflected light with space enough for manipulation of instruments. The cavity having been evacuated of pus, the distinctive feature of the treatment comes next,—"*Careful curettage of the sinus and removal of all fungus granulations and diseased mucosa.*" This is done by a small Volkmann curette. Every nook and cranny of the sinus is thoroughly curetted, special care being given to the fronto nasal canal as the peculiar site of pyogenous granulations. A large communication is thus made with the nasal cavity. It is customary also to gouge out a portion of the floor of the sinus, near its posterior thin part, even entering, in some cases, the ethmoid cells to make the opening large.

Before inserting the drainage tube through the nose a twenty per cent. solution of chloride of zinc is freely applied to every part of the cavity. Iodoform is then insufflated and the wound carefully sutured. The tube is usually taken out in from eight to fifteen days.

Rheumatic and Gouty Affections of the Throat.

Watson Williams (*Laryngoscope*, April, 1898), quoting the words of Lemon, says: "The causes of rheumatic affections of the throat differ in no respect from those of rheumatic affections occurring in other parts of the body; nor can it be said that there are any distinguishing characteristics of rheumatic pharyngitis, tonsillitis or laryngitis." That a large proportion, however, of the cases of acute and chronic pharyngitis and laryngitis are of rheumatic origin is proved by the results of treatment, and also by the fact that the pains are sharper than in simple inflammation. Trudenthal and Heeyngs and Thomas have also demonstrated that a peculiar form of shallow ulceration of the pharynx, which sometimes occurs, is directly of rheumatic origin. These ulcers are typical and heal without cicatrization under anti-rheumatic treatment. Prior to treatment, in cases where ulceration has not developed, the pain, stiffness, swelling, and hyperæmia of the pharynx and larynx can only be positively distinguished as rheumatic in origin by the

presence of rheumatic symptoms in other regions of the body. In these cases response to treatment is the only possible guide.

In laryngeal rheumatism there is always danger of the crico-arytenoid articulation becoming affected, with consequent impairment of movement of the vocal cords.

In some countries gouty affections of the throat are even more common than rheumatic affections. The symptoms are very similar, though the pain may be more intense. Small tophi have been seen on the vocal cords and at the crico-arytenoid joint, though this condition is exceedingly rare. Gouty deposits in the laryngeal mucous membrane have been diagnosed as cancer.

When rheumatism or gout have been correctly diagnosed as the pathological cause of the throat disease, the only local treatment should be in the form of mild, soothing sprays. Internally, for rheumatism, salol, salicine, or the salicylates may be given ; while for gout, colchicum and its preparations, iodides, vichy water, etc., with suitable diet and hygiene.

A Case of Congenital Web Between the Vocal Cords.

Sir Felix Lemon (*Brit. Med. Jour.*, May 28, 1898) reports this case as coming under his observation at the age of sixteen years. The child's cry had been weak and hoarse all her life, accompanied by more or less stridor during inspiration. This improved as she grew older, but had been getting worse again for some time before Lemon saw her. Physically she was small, but well formed. On examination, there was a symmetrical slightly-reddish, triangular membrane connecting the anterior two-thirds of the vocal cords. The free border was crescentic and somewhat thicker than the rest of the web and perfectly white in color. In attempted phonation the vocal cords came almost together, the web folding beneath them. Hence the passage was limited to a small oval opening directly in front of the posterior commissure and arytenoids.

As there was danger from the progressively-increasing dyspnœa, operation became necessary. Intra-laryngeal webs of this kind are always dense, tough, and difficult to cut ; and, after several unsuccessful attempts to excise it by means of different laryngeal knives, he decided to operate with the galvano-cautery point. The first operation was to pass the platinum tip at a white heat through the centre of the web near the anterior commissure. After waiting several days, during which there was but slight reaction, the perfora-

tion also remaining open, he repeated the puncture. This was done at regular intervals until the web was practically destroyed and the vocal cords left in almost a natural condition. The voice improved and the dyspnœa disappeared. Unlike the usual result, after attempted excision, there was no return of the web.

Extirpation of Larynx and Œsophagus.

Garré (*Munch. Med. Woch*, May 3, 1898) reports three cases of malignant disease, all operated on. First, a man, aged 43, the whole of the larynx was extirpated, the œsophagus being dissected from the larynx. Good recovery with no return two years later. Second, woman, aged 49. The entire larynx and large piece of œsophagus were removed. The cancer had commenced in the œsophagus. No return four months afterwards. Third, the larynx, 5 cm. of œsophagus, and 5 upper rings of trachea, were all excised. Patient recovered from operation, but there was early recurrence in the glands.

Garré believes that improved technique, the use of Trendelenburg's cannula and Haun's cannula, together with improved sanitary position after operation, have had the effect of materially reducing the death rate.

Paralysis of the Abductors in Progressive Organic Disease.

J. MacIntyre (*Jour. of Laryng., etc.*), May, 1898, deals with Herr Grossman's views upon this subject, as expressed in the "Archives of Laryngology and Rhinology." Grossman has attacked the views of Sir Felix Lemon, an abstract of which was given in the March number of The Practitioner, and MacIntyre deals briefly with the whole subject. To state the case succinctly, Lemon, after seventeen years of the most careful clinical, pathological and experimental work, claims it as a law, from which there is no deviation, that in general paralysis of the larynx the abductor muscles—the posterior crico-arytenoids—are always affected first. This view has been widely accepted by laryngologists, but not by all; and with it Herr Grossman takes decided issue. In a long and exhaustive article, covering eighty pages, he claims that Lemon's position is not proven, and that the law of primary abductor paralysis cannot be maintained.

While McIntyre does not take sides with either view, he speaks of the difference in the treatment of the subject by the two men

Lemon's views are founded equally upon clinical and experimental research; Grossman's largely on the latter. This latter he thinks is a matter for disappointment, as the two branches of inquiry are equally important in all true scientific investigation. Grossman, founding his conclusions largely upon experiments upon animals, is prepared to admit the greater vulnerability of the abductor over the adductor muscles, as a general rule, while he will not admit it to the dignity of a law. On the other hand Lemon affirms that there is not a single well-authenticated case on record in which it has been shown by post-mortem examination that, in progressive organic lesion of the motor nerves of the larynx, the adductors had been primarily affected.

PEDIATRICS.

IN CHARGE OF

W. B. THISTLE, M.D., L.R.CP., Lond.,

Lecturer on Clinical Medicine and Diseases of Children, University of Toronto; Physician t. Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College

AND

W. J. GREIG, B.A., M.D.

Intestinal Catarrh—Convulsions—Sudden Death.

James Carmichael, Edinburgh (*Pediatrics*, December, 1897), under the above headings, relates the case of a child brought into the hospital in convulsions associated with intestinal symptoms Improvement was steady and the child was considered to be progressing favorably, when on the tenth day the temperature rose rapidly followed by death. No cause could be made out. The opinion of the author is that death was due to auto-intoxication from the intestinal tract. He then devotes a short space to the causes of sudden death in children, mentioning hyperpyrexia *per se;* asphyxia, due to collapse of the air vesicles in a healthy lung where there is pleural effusion on the other side; laryngismus stridulus; marasmus, producing subnormal temperature and collapse; internal capillary hæmorrhage the cause of which is obscure.

Incubators for Infants.

Editorial (*Pediatrics*, January, 1898.) Statistics vary as to the number of prematurely born infants, from five per cent. to twenty per cent. being given. At the Paris Maternity Hospital in one year there were 641 premature children, and amongst these the mortality was thirty-two per cent., that of the other children being eight per cent. The chief desideratum is an even, warm temperature. Mention is made of the old-fashioned devices for this purpose. About sixty years ago Dr. Crede, of Leipzig, constructed a box with double

metallic sides; the space between could be filled with hot water so as to maintain an even temperature. Dr. Tarnier, the designer of the modern conveuse (breeder), received the idea from the artificial conveuses at the "Jardin d'Acclimatation" for the rearing of poultry. During last summer an incubator show was held in London, and there has been erected in Kensington a structure where weakly children can be nursed and kept in new and model conveuses. As yet incubators have only been available for the rich, but it is proposed to establish in London and other large cities incubator stations from which, in answer to messages, incubators will be promptly dispatched to whatever place they are needed.

Pasteurized Milk as a Food for Infants.

(*Pediatrics*, January, 1898.) Heating to 170° F. did not destroy the toxins, nor was their production prevented. The bacterial contaminations of milk can be divided into three groups: (1) The lactic-acid-forming group; (2) the butyric-acid-forming group; (3) the peptonizing bacteria. The first group is very active in causing gastro-intestinal disorders, and requires sterilization at 200° F. or 212° F. to destroy them. The last two groups are not completely destroyed short of complete sterilization. He described the symptoms of what he called milk-poisoning in children fed on pasteurized milk. Mild cases had a diarrhœa coming on suddenly, with a large number of green, ill-smelling movements of an acrid character, and cured by a dose of oil. More serious cases were those in which the milk was taken well for a time, and then gastro-enteritis of a serious nature developed. He cited a number of cases in his own practice in which the diarrhœa resulting from pasteurized milk had stopped on giving sterilized milk. He claimed that all milk fed to infants should be sterilized at 90° C. or 100° C. for ten minutes, and then put on ice. This would check the development of the peptonizing bacteria. The argument that milk was rendered more indigestible by sterilization had not been proved in his experience. A study of the fæces seemed to show that the digestibility of raw, pasteurized, and sterilized milk was about the same. The author concluded that pasteurized milk was an uncertain and, in some cases, a dangerous food for infants.

In the discussion which followed, the author was supported in his opinion by Dr. A. Caillé and Dr. W. L. Carr, and opposed by Drs. Freeman, Chapin, Dessau, Kerby, and Marbott.

Pathological Changes in the Middle Ear During Measles.

Pfingst, Louisville (*Pediatrics*, February 1, 1898), relates a case in which, after the disappearance of the eruption of measles, high fever suddenly developed, and continued high for three days without any apparent cause. The child was sitting up in bed, playing, and complained of no pain. Only once she stated to her mother that she had a slight pain in one of her ears. On the fourth day there was a free discharge of creamy pus from both ears. Bezold has made some investigation into the frequency of ear complications in measles. He made necropsies on eighteen fatal cases of measles. In five of them there had been a discharge from one or both ears but in the other thirteen there had been no ear symptoms except a diminution of function. Post-mortem showed that in every case there was an exudate in the tympanum, consisting of pus cells and fibrin, and always containing some of the pyogenic bacteria Conclusions: That severe cases of measles rarely run their course without involvement of the middle ear; that the inflammatory process usually runs its course without subjective, and often without objective, symptoms, and that only occasionally perforation occurs.

Editorials.

THE ONTARIO MEDICAL COUNCIL.

THE recent meeting of the Ontario Medical Council was, all things considered, a very satisfactory one. Many of the members still talk too much; but, on the whole, the discussions were carried on with considerable ability, and with less bitterness than those of former years. Even Dr. Sangster has shown conclusively that he can discuss certain subjects without giving offence to those who happen to differ from him.

One of the most important subjects discussed was that pertaining to Dominion registration. Many of the members have evidently considered the matter very carefully, and fully realize its vast importance. Not only were the discussions on the motions of Dr. Armour and Dr. Britton broad and liberal in spirit, but even in connection with other subjects the speakers appeared always to keep in view the desirability of inter-provincial reciprocity.

That ever restlesss spirit fron. Ottawa was again in evidence in connection with his Arts' degree matriculation standard. His long-winded orations on the subject are getting terribly wearisome. A hopeless minority has certainly indisputable rights, but it should endeavor to be merciful. Every man has a perfect right to ride a hobby, but he should refrain from making himself an unmitigated nuisance in connection with the same. Even the "Shades" occupying the "Boat-house on the Styx" are commencing to think that the council should try to make the standard of matriculation permanent for a period of something like eighteen months.

The questions of hospital and lodge practice were freely and fully discussed. Most physicians will agree with Drs. Sangster and Spence that, between the practice of druggists, the sales of patent medicines, free treatment in hospitals, and lodge practice, the medical profession is being encroached upon on every side. There can be no doubt as to the existence of the evils referred to; but the discovery of a remedy, in the face of the prejudices of the public, is

a very difficult matter. If our citizens generally got imbued with the idea that the Council desired to legislate solely in the interests of the profession, it would at once lose a large share of its influence, and, perhaps, imperil its very existence.

The proposal to reduce the number of collegiate representatives was threshed out with conside able vigor. Of course there is much to be said on both sides, but we question the wisdom of discussing at such length subjects over which the Council has no control. The establishment of this body was an exceedingly difficult matter. It was impossible to please all parties, and a spirit of compromise was necessary. The Legislature did probably the best it could under the circumstances, without claiming to have brought into existence something which approached perfection. The collegiate representatives have, as a rule, been excellent members; and even the most bitter of the "school-men" haters of a few years ago are now willing to acknowledge that they are entitled to considerable respect.

This was the last regular session for this Council. The next election will be held in November of this year. There will, probably, be a few changes, but it is altogether likely that the majority of the present members will come back next year. Although no one man should have a life lease of membership, still a certain amount of experience makes a member more useful. We hope, therefore, that most of those who have become prominent in our medical parliament will be re-elected.

THE INTERNATIONAL ASSOCIATION OF RAILWAY SURGEONS.

THE recent meeting of this association, held in Toronto, was in many respects a memorable one. It was the largest gathering of medical men this province has known. The great majority of members present consisted of surgeons living in the United States, who were attending their first meeting held in Canada. The association was induced to choose Toronto as a place of meeting largely through the efforts and representations of Dr. Bruce Riordan, who promised a warm and hearty welcome on the part of his friends in Canada.

The Committee of Arrangements had the major quantity of work to do in connection with the meeting. Dr. Riordan, as chairman, worked most assiduously for many months, and showed great execu-

tive ability. He received valuable assistance from Dr. Herbert Bruce, the secretary, Dr. R. A. Pyne, the treasurer, Drs. Arthur Jukes Johnson, Albert Macdonald, Oldright, Gallow, Thorburn, and others. As matters turned out it was evident that the arrangements were positively complete in every particular down to the smallest detail.

The city council gave five hundred dollars towards the entertainment of the visitors in Toronto, and the Ontario Government contributed a similar sum for the entertainment of those who went on the complimentary excursion to Muskoka. Mr. Chas. M. Hays, General Manager of the Grand Trunk Railway, was exceedingly kind in many ways, but especially in placing at the disposal of the committee a special train for the Muskoka excursion. Mr. A. P. Cockburn, of the Muskoka and Georgian Bay Navigation, very kindly furnished a boat for the trip on the lakes. Among others who dealt generously with the association were the Niagara Navigation Company, and the O'Keefe Brewing and Malting Co., and manufacturers of the O'Keefe Liquid Extract of Malt.

We know of no purely medical meeting that ever created so much general interest. The complimentary reception on the evening of the first day was very largely attended, and was exceedingly enjoyable. The Hon. Dr. Ross' speech was a gem, and his references to the friendly relations now existing between the Anglo-Saxon races and nations created immense enthusiasm in the audience. We cannot refer to all the entertainments, excepting to say that they were numerous and invariably crowned with success.

We desire to extend our warmest congratulations to Dr. Riordan on his election to the presidency, an honor which all appear to think he richly deserved, and at the same time, to wish for him and the other officers of the association a highly successful meeting next year in Richmond, Virginia.

ONTARIO MEDICAL LIBRARY ASSOCIATION.

THE annual meeting of the Ontario Medical Library Association was held at Dr. J. E. Graham's residence, Bloor street, June 29th, 1898.

The curator's report showed the library to have 4,406 complete volumes (bound and unbound), and 27 journals regularly on file. An unusually large number of books have been donated during the year by Drs. Osler, Graham, Sweetnam, Powell, Grasett, and others.

Professor William Osler, who was present, was then called upon to address the meeting. He said there were three important points to be remembered in the management of a library:

(1) Get as many good journals complete as possible.

(2) Keep about one hundred good journals on file.

(3) Obtain important new books as fast as they come out.

Referring to the best way of maintaining a library, he mentioned two systems: (1) By voluntary subscription; (2) by an organization of physicians, of which the library is a part. He considered the latter to be the better plan. He advocated the fusing of the different medical societies, and suggested that an annual payment be made toward the library fund, that this organization should have a proper habitation in some central locality, and that it be called the Medical Chambers.

On behalf of the association, the president, Dr. Graham, thanked Dr. Osler for his admirable address, and warmly seconded Dr. Osler's suggestion. The president announced the retirement of Dr. Greig from the treasurership. Dr. Powell stated that all doctors outside Toronto could have access to any books in the library by paying all express charges, subject to required conditions.

Dr. Osler stated that he wished to donate one hundred dollars a year for five years to the library for the purchasing of new books, with the idea of perpetuating the memory of his old preceptor, Dr. Bovell, and he wished this donation to be known as the Bovell Library of the Ontario Medical Library Association. Dr. Graham donated five hundred dollars toward an endowment fund, the interest of which is to be applied towards the purchasing of new books.

The friends of this association have every reason to be pleased with the present position of its library. Its promoters have not received as much assistance from the general profession as they expected; but we hope in the future they will have no cause to complain in this respect. The generous donations of Drs. Osler and Graham will be very highly appreciated.

ESTABLISHMENT OF A NEW SANITARIUM FOR CONSUMPTIVES.

WE have been requested to give the following outline of a movement now being made by medical practitioners and a few other gentlemen of Toronto to provide a sanitarium for consumptives within a few miles of the city, so that city patients, and

those in the vicinity, desiring to take advantage of it, may be easily visited therein by their own physicians and their friends.

It is the intention to have it near one of the trolley lines which run out of the city, on either of which there are very good elevated sites, and to make it a first-class institution in every respect as relates to general equipment, providing all well-recognized modern means for the most scientific treatment of patients, yet on an economical plan.

It is the purpose of the promoters to provide for the poorer classes of patients, and in all stages of the disease, with the hope of checking its progress in cases even considerably advanced in the second stage, as sometimes has been done, and also to provide a home wherein the last days of hopeless sufferers may be relieved of their distressing symptoms, and made as comfortable as the resources of modern medicine, including, of course, the best of nursing and general care, can make them, and not be a source of danger to their relatives and others.

It is purposed to obtain, if possible, a small farm in an elevated, sunny locality, as free from fogs and dampness as possible, in order both to provide ample room for buildings, on the cottage plan, for the different classes of patients and stages of the disease, and also that some of the patients who would be benefited by such exercise may engage in farm and garden work, and so help to provide the institution with the necessary farm and garden food stuffs, including food for cows, poultry, etc.

We thoroughly approve of the proposed scheme as outlined, and do so all the more willingly because we believe it will not in any way interfere with the success of the worthy institution at Gravenhurst. A properly conducted sanitarium would afford great relief to the general hospitals of Toronto and other parts of Ontario, and much greater protection to the general public.

Meetings of Medical Societies.

TORONTO PATHOLOGICAL SOCIETY.

The regular meeting of this society was held in the Biological Department of Toronto University, April 30th, 1898.

Dr. H. B. Anderson in the chair.

Minutes of previous meeting taken as read, and adopted.

There were no committees to report.

No nominations for membership.

A large number of members was present.

Dr. Peters reported on a case of multiple gall stones.

T. K., æt. 47, admitted to the Toronto General Hospital March 18th, 1898.

His occupation, a farmer. Habits good. Drinks very little water, and scarcely ever perspires. His family history is good.

Personal history: From the age of twenty to the age of forty-one years he suffered from attacks of colicy pains two, three or four times a year. These pains were accompanied by constipation, and were relieved by free motion of the bowels. Six years ago he had a severe fall, injuring the right wrist, and was laid up in bed. Three days after the injury he was seized with intermittent attacks of severe colicy pains. He became jaundiced; stools were gray colored and pasty. This attack lasted two weeks, when recovery was complete.

Since Christmas, 1897, he has suffered from an uneasiness which he referred to the region of the stomach. This prevented his sleeping at times. The pain gradually grew worse, and five weeks ago it began to assume a colicy character. The yellow tint of the skin returned, and the stools again became clay-colored and pasty. There was also great itchiness of the skin.

Condition on admission.—The skin is of a bright saffron yellow. The sclerotics are very yellow, and also the conjunctiva. Abdomen moderately full; the walls thick, but not held tense. The costal and iliac furrows are distinct and equal. Flanks equal and normal.

Liver.—Dulness begins at the fourth rib above and extends to the costal margin, but not lower. The margin is not easily palpated. On inspection a slight fulness is apparent in the right hypochondriac region, and on light palpation a mass can be felt in this region. On deep palpation it can be made out as a tumor about four inches in diameter, and elongated from above downwards. Its internal, inferior and external limitations can be readily made out, but its superior contour is apparently continuous with that of the liver. It is freely movable from side to side, and can be moved from the right flank to a point beyond the middle line of the body. It moves freely on respiration, but cannot be displaced upwards so as to disappear under the liver. The right kidney cannot be felt. There is slight tympanites on percussion over the whole area of the tumor in the dorsal decubitus. In the knee elbow position the tumor comes to the anterior abdominal wall, and is dull on percussion. The urine is in all respects normal in quality and quantity, with the exception that it is loaded with bile pigment. The tumor cannot be felt by rectal examination.

Operation.—An incision was made over the tumor in the right linea semilunaris. On opening the peritoneum it was seen that the tumor consisted of the distended gall bladder, the wall of which was considerably thickened and grayish white in color. It was joined to the liver over its entire surface by dense vascular adhesions, and on the surface of the gall bladder enlarged injected lymphatic vessels ramified. The gall bladder was aspirated, the fluid coming away being of a dirty gray color, but without any bile pigment, and containing a small quantity of mucous and no pus. After washing out through the aspirating needle the gall bladder was opened, and gall stones to the number of 571 were removed. These varied in size from that of a hemp seed to that of a bean, and were whitish-brown in color, most of them being faceted. On examination of the portal area, hard nodular masses could be felt occupying the under surface of the liver and adjacent parts. These nodules were thought to be of a cancerous character. No gall stones could be made out in the common duct nor in the cystic duct.

Since the operation the patient's condition has improved somewhat; the icterus is less marked, but has not altogether disappeared. Bile discharges in small quantities intermittingly from the fistula, but the stools still remain clay-colored and pasty.

SPECIMENS ILLUSTRATING SOME POINTS IN THE PATHOLOGY OF A TUBERCULOUS ABSCESS.

BY A. PRIMROSE, M.B., C.M. EDIN., M.R.C.S. ENG. PROFESSOR OF ANATOMY, UNIVERSITY OF TORONTO.

The specimens presented are from certain cases which have come into my possession in the course of my surgical practice. Whilst in most of these cases a bacteriological examination was made to determine the nature of the case, the features which I refer to chiefly in this paper are in rela ion to the existence of histological tubercle and the other characteristic appearances observed under the microscope in tuberculous tissue, namely caseation and abscess formation.

We make now a very definite distinction between the pus of an ordinary acute abscess and the "pus" of a tuberculous abscess. In fact the difference between the two is so great that it has been suggested that we are not warranted in describing the fluid contents of a tuberculous abscess as "pus." It has been shown for example that pyogenic organisms will grow luxuriantly in the pus of a tuberculous abscess, whilst they will not grow in the pus which has been previously the seat of their growth. Whilst, however, the so-called pyogenic organisms are absent from tuberculous pus we do find dead leucocytes in the fluid, although not so numerous as in an acute abscess. The tuberculous abscess contains a considerable amount of broken down material (detritus) which floats free in the fluid. On examining this material under the microscope it is found to consist of caseous necrotic matter and occasionally, as some of my specimens show, formed elements exhibiting histological tubercle and leucocytes embedded in these masses. The wall of a tuberculous abscess is essentially characteristic: in all its ramifications it is found to exhibit an active tuberculous process. In the sections of the abscess wall the specimens presented show individual tubercles in all stages of development, the caseous material forming a late product. Beyond this area of tubercular tissue is usually found in more or less definite development, a layer of condensed inflammatory tissue forming the outermost layer of the abscess wall.

The etiology of the tuberculous abscess is best understood by studying its development in a tuberculous gland. Thus certain of my specimens illustrate the early stage, where the gland has become involved, and one finds scattered throughout the gland substance a series of tubercular foci, exhibiting the characteristic giant cell surrounded by the so-called epithelioid cells, and surrounding these again

leucocytes. At a later stage may be observed an aggregation of these tubercles; still later a caseous centre is developed in the mass of tubercles; finally liquefaction occurs, and an abscess is formed. Some of my specimens have been made from sections transversely through a small tuberculous abscess, and these exhibit the abscess cavity in the centre surrounded by breaking-down caseous material forming the immediate boundaries of the cavity, outside which one finds tubercles in an active stage of development, and outside this again condensed inflammatory tissue. This inflamed tissue often persists as a thickened gland capsule, the whole of the normal gland structure having been destroyed during the progress of the disease. An abscess may, however, break beyond the limitations of the gland capsule and infiltrate the surrounding tissues, at first a simple periadenitis, then tubercular infiltration and abscess formation may extend to an unlimited extent.

Another point in the development of a tuberculous abscess of importance is regarding the fact that the abscess may be multiple in character. Thus even within the same gland capsule a series of aggregations of tubercles may develop caseous centres, and thus a number of caseous centres may be formed, the centres of which in turn are undergoing liquefaction. These multiple abscesses soon run together in the gland to form a single abscess cavity, but in a specimen presented of a tuberculous kidney it is obvious that here a series of tuberculous abscesses have formed of considerable size, not yet communicating with one another.

Abscess formation is occasionally delayed to a remarkable extent whilst tuberculous disease is advancing. This for example is common in connection with the synovial membrane of a diarthroidal joint. Thus a specimen exhibited shows an enormous thickening of the synovial membrane of the knee joint, removed by arthretomy, due to tuberculous disease without abscess formation therein.

Lastly, one may call attention to the fact that if a tuberculous abscess be kept sterile, *i.e.*, as regards the entrance of pyogenic organisms, it is capable of resorption. A specimen exhibited illustrates this point. The patient was subjected to the operation of laminectomy for pressure of an abscess upon the spinal cord. One found the abscess in the neural canal and its fluid condition was quite evident at the time of operation; upon opening the abscess in the region indicated one observed that the respiratory movement caused an ebb and flow of the pus into the neural canal. This was accounted for by the fact that the greater bulk of the abscess lay in the posterior mediastinum. Some weeks subse-

quently, the man had died. The wound had healed and all discharge had ceased. The abscess in front of the spine was now found no longer in a fluid condition, but composed of caseous material, which on bacteriological examination was found absolutely sterile. The result might have been attributed solely to drainage, but one must believe that in such cases resorption occurs, and the abscess by this means dries up. Instances are not rare where, without opening the abscess, this resorption occurs, more particularly in connection with tuberculous joint disease.

These facts regarding the developments, the spread and the spontaneous cure of tubercular abscesses are of great importance in determining the proper method of dealing surgically with the pathological phenomena presented.

Dr. Anderson acting for Dr. Bingham presented some tubercular glands removed from beneath the pectoral muscles of a girl of seventeen years. The glands had been present for three months. The temperature was high before operation with marked hectic signs which disappeared after operation.

The sections of these glands showed tubercle bacilli, few giant cells, but epitheloid and lymphoid cells, and well-marked caseation.

He asked as to the method employed in Dr. Primrose's case for demonstrating the tubercle bacillus.

Dr. Fotheringham, discussing Dr. Bingham's case: The constitutional symptoms in this case, which was one of mine, were so very marked as to make me feel certain that suppuration was going on—either that or extensive deposits in the lung. Yet all the glands were apparently unsoftened, unless in the centre. No pus or detritus was found in the axilla. There were no deposits in the chest or elsewhere, so that the picture of hectic fever shown by the patient was due entirely to the process in the axilla.

Dr. Mackenzie in answer to Dr. Anderson's question said that the draining method used in this case was the Ziehl-Neelsen.

He pointed out that a recent author claimed that the inability to demonstrate the bacillus was due to the hardening method, and that by the use of an alcoholic solution of pyrogallol he had succeeded in easily demonstrating the bacillus in all tubercular conditions.

Dr. Peters reported a "case of gangrenous appendicitis."

A.D., age 14, care of Dr. Thom, Woodbridge, Ont. Has been healthy as a rule, but during the past few weeks has not been very well. April 20th, 1898, went to school, but complained of pain in abdomen. April 21st was seen by Dr. Thom. Tenderness over

McBurney's point, slight fever, no vomiting, bowels moved. The next two days he continued to be slightly feverish, and the tenderness increased, and thickness could be felt in the region of the appendix. On the evening of the 24th his temperature was 104, pulse 120. There was very little tympanitis. Rigidity of the abdominal muscles was marked, especially on the right side. A tender swelling of considerable size could be felt on the right side. I saw him first on April 25th at 9.30 a.m. His temperature at that time was 99 3 5, pulse 88. Expression was very good. Tongue was furred slightly; there was no tympanitis, on the contrary the abdomen was slightly retracted. The muscles were very tense on the right side. A tumor could be felt on the right side one inch below McBurney's point. This seemed to be about the size of an egg, was slightly movable and very tender. Nothing was felt on rectal examination. Abdomen was resonant all over.

Diagnosis.—Appendicitis localized by plastic lymph.

Operation.—Oblique incision two inches long was made over the tumor, which was attached to the abdominal wall by very slight adhesions. The mass felt was tolerably freely movable, and consisted of the tip of a rather long appendix surrounded by a process of omentum, the whole being matted together by inflammatory lymph. After packing sponges around the area of the operation, the mass was delivered from the wound without much difficulty, the momentum was tied off by a double interlaced ligature of silk, and after tying the mesentery of the appendix the latter was amputated in the usual way by making a coat sleeve flap. Abdominal wound was stitched up without drainage, silkworm gut being used. On examining the removed mass, the appendix was found to penetrate it to the extent of about one and a-half inches. On dissecting the lymph and the omentum from the surface of the appendix a cavity containing half a drachm of fœtid pus was found subtending a gangrenous area of the tip of the appendix about one-half inch in length, and occupying about one-half the circumference of the organ. No foreign body was found in the appendix.

Dr. Fotheringham,—The specimen would seem to be an excellent example of what Professor Adami told us at the December meeting, seemed to be one function of the omentum, that it is instantly mobilized on an alarm of inflammation within the abdominal cavity, and sets itself the task of assisting in the fencing off of the inflammatory process.

Dr. Primrose, discussing Dr. Peters' paper, asked as to the origin and ultimate fate of lymph.

Drs. McPhedran, Parsons, and Allen discussed. Dr. Peters closed the discussion.

Dr. McPhedran presented clinical notes of the following case, Dr. Amyot giving the post-mortem report.

John B., aged 62, a merchant tailor. His health had always been good until September, 1893, when, after being indisposed for some days, he had two convulsions with profound coma, lasting twenty-four hours. He gradually recovered consciousness. Two weeks later, while convalescing, signs of gangrene of the left lung set in, the breath being very offensive, the sputum dark brown, and containing yellow, elastic tissue. The gangrenous area enlarged and he had profuse hæmoptysis. Recovery followed during the winter. In April the signs recurred with free hæmorrhage. These signs of gangrene with hæmorrhage recurred from time to time, until the end of 1894, after which the recovery from the pulmonary disease was complete. In the spring of 1895 he had a slight hemiplegia, affecting the left side, and a few days later an epileptic seizure. These seizures occurred at intervals of a few weeks for some months, but were gradually controlled by bromide, returning if it was omitted. The mental condition became much impaired. There was no improvement until early in 1897, when he regained almost full power in the left side and the mental faculties became greatly improved, although he remained irascible, a condition partly explained by financial losses. He remained in very good condition all last winter. On March 28th last, after a few days of somewhat impaired appetite, he had a profuse hæmatemsis followed by syncope. During the following week the hæmorrhage recurred four times freely, but much less so than on the first occasion. He was greatly prostrated, very pallid, and unable to take food. Weakness increased, the odor from his breath and person became exceedingly offensive. Death occurred on April 12th.

DR. AMYOT'S REPORT.

Brain. One-half inch from mesial line, right side. A trapezium 1¼ × ¾ in. in hardened specimen, looks as though dried. It is depressed; the pia mater is adherent and thinned over this area. It is brownish-gray in color.

On section, a branched cavity, pigmented brownish-yellow at borders, is seen extending from cortex to central portion of brain. The cavity is about two inches long.

On section, the microscope shows what seems to be a dilated vessel. Some non-striated muscle fibre can still be seen. The pigment is

contained chiefly in round cells distributed quite ¼ in from edge of cavity, shading off in number. This portion of brain is distinctly smaller than that on left side. In the third division of the lenticular nucleus, right side, the arteries are dilated and surrounded by a zone of pigment.

Lungs. Right lung normal. Upper lobe of left made up chiefly of bands of dense, fibrous tissue, enclosing emphyematous air-cells. The lower lobe is hypertrophied (compensatory), so as to functionate for that side.

Heart. Enlarged and flabby, dilated and hypertrophied. Myofibrosis in left ventricle chiefly, and here chiefly in musculi papillares and immediately underneath the endocardium, particularly near the apex.

Microscopically. Patches of dense fibrous tissues and shreds, accentuations of the normal bands. The cells, many of them, are illy striated, the nuclei being indistinct.

Stomach. An ulcer, about 2½ in. diameter, rather oval in form at the middle of lesser curvature—covered with a greenish grey slough—base thickened, surface raised above general surface. A thin red border.

Microscopically. Glands remarkably well prepared right to edge of ulcer. Ulcer covered by necrotic area. Floor of ulcer shows degenerated bundles of muscle tissue and an excessive infiltration throughout the thickness of wall.

Kidneys. Right one hypoplastic and cystic; the whole mass, about three inches in length, shows only a few tubules microscopically, and nearly all these filled with colloid material. No malpighian bodies. Arteries much thickened. The interstitial tissues much infiltrated.

Left Kidney. Enlarged—granular with one large cyst one inch in diameter. Cortex, normal thickness. Medulla encroached on by fat. Show active interstitial inflammation. Arterio-sclerosis. Fibrosis of malpighian bodies, many atrophied and some remarkably hypertrophied. Tubules two or three times normal size. The cells show in the hypertrophy, not actually increased in number, but in size. Much interstitial cellular infiltration.

MELANOTIC SARCOMA.

By Dr. Peters.

Mrs. F., aged 43. She was born with three pigmented birthmarks on face, one on the outer aspect of the lower jaw, one on the temporal region, and one just below the eye, all on the left side of

the face. She has always enjoyed good health, with the exception of the trouble from these tumors, and there is no history of new growths in the family. Twenty-five years ago the birth-mark on the lower jaw was removed by Dr. Canniff. She does not think that at that time there was any considerable tumor present. The wound healed, leaving a large, uneven, radiating scar.

Second operation.—About seven years ago a tumor appeared in the temporal region. It grew slowly for two or three years, when it was removed. At the same time there was a small tumor removed from under the left eye by ligature. Six months from the date of the second operation the tumor began to grow again, and was operated upon for the third time, after a period of three years, by myself. At that time the tumor was about as large as a cricket ball, intensely black, and occupying the temporal region of the left side. It was under the temporal fascia, and skin was not adherent, and only involved to a slight extent. A large semi-lunar flap was raised from the surface of the tumor and the whole mass dissected away, including the periosteum. The zygoma was sawn through and the whole of the temporal muscle removed, together with the fascia surrounding it. It was found to have infiltrated the tissues of the neighborhood in small branching processes extending forward under the lower eyelid. All visible nodules were removed as widely as possible. The wound healed throughout, by first intention. The mass throughout was of an intense blackness.

Two years after this a new growth appeared under the inner part of the eye, which grew slowly for a year, and was removed by Drs. Wardlaw and Phillips.

Six months after this a small growth re-appeared in the temporal region, and has been increasing slowly in size until the present. It consists of three nodules; the largest being the size of a marble. Two small nodules are also present under the left eyelid. These were all removed by operation in April, 1898, and are herewith presented as specimens. The microscope shows small spindle-celled sarcoma, with intense pigmentation of both the cells and intercellular substance.

The extraordinary feature of this case is the great length of time during which the melanotic sarcoma has grown without destroying life. It is univerally recognized as the most malignant form of sarcoma, and usually terminates fatally within a period of about eighteen months, or sometimes less. This case, however, has lasted some twenty-five years, and has been operated upon five times at varying intervals. The prognosis, of course, remains somewhat gloomy,

but, with early attention to recurrent nodules, there is a reasonable prospect that the patient may, in this case, live many years.

Dr. Wm. Oldright suggested the removal of all moles, as they never lead to any good.

RUPTURED HEART.

By Dr. John Amyot.

Patient, shoemaker, æt. 55.

History. Came to the out-patient department of the Toronto General Hospital on Friday, March 25th, 1898. Complained of pain in the left side, lower end of the sternum, and in the epigastric region. This pain radiated from the lower end of the sternum upwards and backwards to the shoulders. It was more severe on the left side, and continued down the left arm. Pain was pretty severe. His respirations numbered 35 to the minute. This condition had been present for three days. Never had any similar attack previously.

Superficial cardiac dulness slightly increased. Aortic systolic murmur of blowing character, not very loud. Slight friction sound in præcordial region, which did not cease when he held his breath.

Treated for pleurisy and stomach trouble.

Returned to hospital next day and became an in patient. Admitted late in afternoon ; not examined thoroughly. At 2 a.m. on Monday, March 28th, sat up in bed, and suddenly dropped over dead.

Autopsy. March 28th, 2.30 p.m., twelve hours after death.

General condition : Good. *Peritoneum :* Normal. *Kidneys :* Small granular. *Liver :* Normal. *Pancreas :* Normal. *Right lung :* No pleural adhesions. Fluid in right pleural cavity not excessive. *Left lung :* No pleural adhesions. Slight excess of fluid in left pleural cavity. No signs of recent inflammation. *Pericardium :* No pericardial adhesions. Pericardial sac distended with a large amount of jelly like clot of a dark red color. Where the parietal pericardium had been in contact with the presenting anterior surface of left ventricle there was a patch of inflammatory exudate over an inch in diameter. *Heart :* Hypertrophy and dilatation of left ventricle. In the central portion of the presenting anterior surface of the left ventricle there is a rupture about an inch and a half in length. The rupture is a ragged slit-like opening, not straight through the ventricular, but obliquely. The coronary arteries are atheromatous. The anterior coronary is plugged by a thrombus just above its bifurcation. Both branches are occluded.

Valves: Aortic valve: Left segment and posterior segment adherent; right segment free. Some recent vegetations on aortic valves. Other valves are normal.

In the pulmonary artery a large ante-mortem clot was found.

The aorta was atheromatous.

In the cavity of the left ventricle over the internal opening of the rupture is a large laminated blood clot which was firmly attached to the ventricular wall. Cultures made from the ventricular wall close to the rupture resulted in the growth of a pure culture of pneumococcus.

The meeting then adjourned.

H. C. PARSONS,
Rec. Secy.

THE LONDON MEDICAL SOCIETY.

THE regular monthly meeting of London Medical Association was held April 18. Present: Drs. Eccles (in the chair), Wishart, Moorhouse, Graham, Roome, Meek, Weekes, Ferguson, MacArthur, MacLaren, Campbell, MacCallum, MacDonald, Bayly, Macklin, Thompson, W. J. Stevenson, H. A. Stevenson, and English.

Minutes of previous regular and special meetings read and approved.

On motion of Drs Bayly and Roome, Dr. H. A. Kingsmill was elected a member of the association.

Dr. Ovens read a carefully-prepared and instructive paper on "Disease of the Ethmoidal Sinuses," which will appear in next issue.

Meeting closed at 9 20 p.m. to give time for a meeting of all the medical profession *re* building of the new hospital.

On May 9th was held the regular monthly meeting of the London Medical Association. Dr. Eccles in the chair, and present Drs. Hodge, Teasdall, Ferguson, Meek, Ovens, Graham, H. A. Stevenson, W. J. Stevenson and English.

The minutes of previous meeting were read and approved, and, in accordance with notice, the meeting was devoted to pathological and microscopical work.

Dr. H. A. Stevenson presented a cast of the trachea, showing the bifurcation of the bronchi, expectorated by a patient of Dr. Eccles suffering from fibrinous pneumonia. On examination Dr. Stevenson had found diphtheritic bacillus. The patient was a man,

age 54, and robust. Had ordinary evidences of pneumonia. On April 24th, 1898, exudate first appeared on pharynx, not readily removed. On 27th specimen shown was expectorated. In the early stages there had appeared more blood in the sputum than was common in ordinary pneumonia.

In connection with the exhibition one expectorated by a patient of Dr. Hodge four years previously was shown also, which also showed the growth into the bronchial tubes. The patient lived three days after it was expectorated.

A case of tubal pregnancy, occurring in the practice of Dr. Ferguson (will be published in THE CANADIAN PRACTITIONER), was reported, and the fœtus and placenta exhibited.

An inverted uterus with a fibroid tumor was presented, in which all efforts to reduce had been unsuccessful, and a supravaginal hysterectomy had been done. Phlegmasia alba dolens had developed in three days, probably due to the extension of phlebitis present at time of operation.

The brain of a female patient, aged 52, who, eight weeks previously, suffered from an apoplectic seizure, was next shown. She suffered from aphasia and paralysis of right side of face and left leg. Again, on April 8th, another stroke took place, with almost instant death. The dura mater was found adherent; no sign of external hæmorrhage. A smooth cavity the size of a hen's egg was found at the inner side of the left frontal sinus, and a small cavity in the left occipital lobe.

Dr. W. J. Stevenson showed an ununited fracture of the acetabulum in a dog. Also a 7½ months fœtus, with the amniotic sac unruptured, and the placenta, which had been partial placenta prævia.

Dr. English made reference to two recent cases of miscarriage in which fœtus and placenta came away together, and the amniotic sac unruptured.

Meeting adjourned at 10.15, without examining the microscopical specimens.

Copied from the minute book by the corresponding secretary,

W. S MACDONALD,
679 Dundas street, London, Ont.

Book Reviews.

TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION. Vol. X. Tenth session. Held at St. Louis, November, 1897.

We have frequently had occasion to refer to the meetings of this great society of the "sunny south," which continues to do really magnificent work in connection with the important subject of Surgery and Gynæcology. A perusal of this volume of transactions shows clearly that the meeting of 1897 quite equalled those of previous years. Anything better can scarcely be expected. One of the most interesting features was the exhibition of a large number of radiographs by Dr. Brokaw, of St. Louis. Among the most important subjects discussed were: Surgery of the gall bladder, appendicectomy, extra uterine pregnancy, cystic disease of the mamma, chronic proctitis, pyuria, tetanus, operative treatment for enlarged prostate, symphysiotomy, etc. As usual a large measure of the success of the meeting was due to the untiring efforts of the secretary, Dr. W. E. B. Davis, of Birmingham, Ala.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS. Vol. X., for the year 1897. Wm. J. Dornan, Philadelphia, Printer.

The tenth annual meeting of this Association was held in the Cataract House, Niagara Falls, N.Y., in August, 1897, under the presidency of Dr. Jas. F. W. Ross, of Toronto. The volume of Transactions which we have received from the able and genial secretary, Dr. Wm. Warren Potter, of Buffalo, is a very handsome book, and reflects great credit on the printer; while the very full report of the discussions is equally creditable to the stenographer, Mr. Whitford, of Chicago. Many papers of a high order of excellence were read, and many of the discussions following were spirited and interesting. We know of no medical society in America where greater encouragement is given to full and free discussion, and we know of no meeting of the year where the members acquitted themselves more creditably than did those of this society in the colonial parlors of the Cataract House.

THE SURGICAL COMPLICATIONS AND SEQUELS OF TYPHOID FEVER. By William W. Keen, M.D., LL.D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia; Vice-President of the College of Physicians of Philadelphia; Membre Correspondant Etranger de la Société de Chirurgie de Paris; Membre Honorarie de la Société Belge de Chirurgie. Based upon tables of 1,700 cases, compiled by the author and by Thompson S. Westcott, M.D., Instructor in Diseases of Children, University of Pennsylvania; Visiting Physician to the Methodist Episcopal Hospital, Philadelphia; with a chapter on the Ocular Complications of Typhoid Fever, by George E. deSchweinitz, A.M., M.D., Professor of Ophthalmology, Jefferson Medical College; Professor of Diseases of the Eye, Philadelphia Polyclinic; Ophthalmic Surgeon to the Philadelphia and other Othopedic Hospitals; and as an appendix the Toner Lecture No. V. Philadelphia: W. B. Saunders, 925 Walnut street, 1898.

A monograph of nearly 400 pages on such an important subject to the profession generally as the surgery of typhoid fever and by so distinguished a member of the profession as William W. Keen always arrests our attention. The subject is not a new one to Dr. Keen. In 1876 he delivered the Toner Lecture No. V., at Washington, on the Surgical Complications and Sequels of the Continued Fevers. Inclusive of the cases made use of in that lecture, he has now 1700 cases which are tabulated most fully, and which "practically include nearly all the cases recorded in the last fifty years."

How large a role the complications and sequels of typhoid play is well shown by the statement of Holscher, that of 2,000 fatal cases tabulated by him only 24 per cent. died as the result of the typhoid infection *per se*, and 76 per cent. from the various medical and surgical complications and sequels.

Chapter III. is devoted to gangrene, a subject which the author declares that neither physicians nor surgeons have given the attention which its importance merits. "One would suppose *a priori* that gangrene would only follow severe attacks, but so large a number of cases have been reported, after relatively mild attacks, that we must conclude the possibility of gangrene in mild cases as well as severe ones. Hence the watchfulness of the physician should never relax by reason of the fact that the case is running a mild course, and that gangrene is an infrequent result of typhoid." The commonest time for this complication is to appear in the second and third weeks.

Chapter IV. takes up the affections of the joints, and Chapter V. those of the bones. Excepting the laryngeal complications and sequels the most frequent are those connected with the bones. In his Toner lecture Dr. Keen had gathered 69 cases. In the twenty years since then he has collected 168 additional cases. One remarkable feature of these bone cases is the viability of the bacilli at such very long periods after the original attack of typhoid. One case is reported where a pure culture was obtained after a lapse of seven years. The tibiæ and the ribs appear to be the bones most frequently affected. Though the larynx and

the joints are the two sites of frequent surgical complications of typhoid, in not a single case has the bacillus been found in the joints or the larynx.

Chapter XV. is devoted to intestinal perforation—probably the chapter which is of more interest to the general practitioner than any other in the work. The history of perforation is taken up, the frequency, the age at which it occurs, the date of occurrence, the seat of perforation, the number of perforations, the character of the perforation, the duration of life after perforation, the symptoms, the diagnosis, the dangers of surgical interference, the time of operation, the technique of the operation, etc.

The outlook of surgical interference in these cases is not very encouraging, but it is far from hopeless. Of eighty-three cases operated upon sixteen have recovered, or 19.3 per cent. If, knowing the possibility of recovery, physicians more frequently call in the surgeon, and do so at once, the future will show better results. "When every case of intestinal perforation (except the moribund) is operated upon within twenty-four hours, I believe that we shall save at least one-third of the cases and possibly more." He concludes: "The *treatment* must be bold, but not rash; conservative, but not timid; prompt, but not hasty; thorough, but not reckless."

In the chapter on affections of the gall-bladder, attention is called to the propriety of immediate operation in peritonitis arising from similar perforations of the gall-bladder. Four such cases have been operated upon with three recoveries.

Obviously only a few of the prominent points in this admirable work can be mentioned. The book should occupy a place on the shelves of every practitioner who has even "a liking for surgery."

A System of Practical Medicine. By American authors. Edited by Alfred Lee Loomis, M.D., Late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M.D., Professor of Medicine in the Cornell University Medical College, New York. In four imperial octavo volumes. Volume IV.—Diseases of the Nervous System and Mind; Vasomotor and Trophic Disorders; Diseases of the Muscles; Osteo-Malacia; Rachitis; Rheumatism; Arthritis; Gout; Lithæmia; Obesity; Scurvy; Addison's Disease. 1,099 pages, 95 engravings, and 8 full-page plates in colors and monochrome. For sale by subscription. Per volume, Cloth, $5; Leather, $6; Half Morocco, $7. Lea Brothers & Co., Publishers, Philadelphia and New York, 1898.

Medical Items.

AT the last meeting of the American Association of Genito-urinary Surgeons, Dr. James Bell, of Montreal, was elected president for the ensuing year.

DR. WM. OSLER spent a few days in Toronto in June. Honors are still being showered on him, the latest being F.R.S., one of the highest prizes in the gift of science. He is now in Great Britain, having gone with Drs. Roddick and Stewart, of Montreal, to attend the meeting of the British Association.

PROF. ADAMI, of Montreal, was offered the Chair of Pathology in Cornell University, but decided not to leave McGill.

DONALD ARMOUR, B.A., M.B., M.R.C.P., has been appointed Demonstrator of Anatomy in University College, London, Eng.

WE learn, through a letter written to the *Canada Lancet* by our friend Dr. James M. Cochrane, a Canadian graduate, now in London, Eng., that Surgeon-Captain Scott, a graduate of Trinity in 1883, and one of the house surgeons in Toronto General Hospital, 1883-4, has distinguished himself in the army medical service in Africa. In an encounter with the natives he received a serious fracture of the leg, and the *Times* said he "behaved with great gallantry; for, notwithstanding his own injuries, he continued to attend on the others wounded who were brought to him for that purpose."

SURGEON MAJOR NATTRESS has gone to England to report at the War Office. He expects to take a course at Netley Hospital before he returns.

DR. CHARLES W. PURDY, of Chicago, visited Toronto in July, and remained a few days.

DR. J. D. WEBSTER (Tor. '98), has commenced practice in Buffalo.

AT the last general election in France fifty-seven physicians were elected, that is, about one-tenth of the whole number in the Chamber of Deputies.

LORD LISTER was presented with the freedom of the city of Edinburgh, June 15th.

THOMAS B. BENTLY, M.B.—Dr. Thomas B. Bently died at his residence, Sutton West, June 13, aged 49. He received his medical education in the Toronto School of Medicine, and passed his final examination for the degree of M.B. in the University of Toronto in 1869.

THERAPEUTICAL ITEMS.

FOR SALE, IN MINNEAPOLIS, MINNESOTA.

A physician in general practice, desiring to prepare a specialty, offers for sale his entire household furniture of an eight-roomed house, and office furniture of a double waiting-room, private room and laboratory. Also stable outfit, consisting of a horse, physician's phæton, ladies' phæton, cutter, robes, etc. Patrons largely Canadian. Over 480 families. Price for entire outfit, with full proceeds from a two months' co-partnership and proper introduction, $1,200 cash, or will sell stable and office outfit, with some introduction and proceeds of co partnership, for $900 cash. Do not apply unless you mean business. Address: "General Practitioner," care of CANADIAN PRACTITIONER.

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I have been using Sanmetto in my practice for two or three years. I have used it in a good many cases of cystitis, prostatitis, and in all cases of irritable bladder, with the most gratifying results. R. T. Hocker, M.D., Ex-Pres. So. Western Ky. Med. Assoc., Arlington, Ky.

The Lambert Pharmacal Company, St. Louis, will be pleased to send, free, a cloth-bound copy of their latest publication on summer diarrhœa to those physicians who drop a post card request.

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Professional card for sample to W. LLOYD WOOD, Toronto,
General Agent for Canada.

THE

CANADIAN PRACTITIONER

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PUBLISHERS:
THE PRACTITIONER PUBLISHING COMPANY,
TORONTO.

VOL. XXIII.] AUGUST, 1898. [No. 8

Original Communications.

ON THE STAGES AND FORMS OF SYPHILIS, WITH MORE ESPECIAL REFERENCE TO THE HEPATIC MANIFESTATIONS OF THE DISEASE.*

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(Continued from page 400.)

The liver was deformed, weighed 1960 grams, and showed four large areas of puckering on the upper aspect of the right lobe. A rounded mass 3 cm., broad and 2.5 cm. long, projected from the lower end of the right lobe, the truncated end of which was characteristically puckered; the appearance of the organ was typically syphilitic. The intestines showed no signs of previous dysentery.

* Delivered at the meeting of the Ontario Medical Association at Toronto, June 1, 1898.

In this case, the section through the puckerings showed singularly little fibrous tissue despite the extreme contraction and deformity of the region where they were present. There were no proper gummatous areas to be made out, and the only satisfactory explanation is that in this liver, which presented so obviously the appearance of tertiary syphilis, there had been complete or almost complete absorption of the syphilitic deposits.

It may be suggested that the resemblance between tuberculosis and syphilis which I have thus emphasized is imperfect, in that, when tuberculosis once affects the organ, the virus always remains latent in that organ, and there is not the complete absorption which we must acknowledge takes place in the majority of cases in syphilis. For it is admitted that at the most (and that in untreated cases) only 30 per cent. of those infected show tertiary symptoms. Among those treated the percentage is only about 10 per cent. But this is another modern popular fallacy; there may be complete cure of tuberculosis and complete disappearance of the tubercles even when they have become distinctly fibrous. This is proved by the experimental infection of dogs with peritoneal tuberculosis and arrest of the process by repeated laparotomy. I need scarce remind you that it also has been recognized in some cases that there may be arrest of tubercular peritonitis in man by similar means. Definite cases are on record in which there has been a complete disappearance of well-marked fibroid tubercles from the serous coats of the intestines. The analogy, therefore, between tuberculosis and syphilis must be regarded as complete in this respect.

Rarely we come across a syphilitic liver showing very clear evidence of the progressive development of the hepatic condition.

Case 4. Such a case have I met with in a male of twenty-eight, who entered the Royal Victoria Hospital under Dr. Stewart with a rupture of one or more branches of the middle cerebral artery, and who had, two years before, been treated by Dr. James Bell for syphilis. Whether the syphilis then was primary, secondary, or of later manifestations, I cannot ascertain, for the patient died before his history could be elicited. In this case there was syphilitic inflammation of the ventricles of the brain, and early atheroma of smaller arteries. The liver showed three or four puckered scars, and, microscopically, fairly frequent gummata, with giant cells and small localized infiltrations of leucocytes. There were no signs of tuberculosis anywhere, and the sections of the liver stained with carbol-fuchsin did not show any tubercle bacilli. In this case the puckered scars indicated gummata had undergone cicatrization and fairly com-

plete absorption. The small infiltration of leucocytes can only be regarded as miliary gummata resembling in every respect those seen in the infantile liver of congenital syphilis. The case must be regarded as one in which, as shown in the ventricle of the brain and in the liver, the active syphilitic process had been rekindled, or had progressed, with rapidly fatal results.

Case 1 was probably an example of the same condition.

The only manifestation of syphilis in connection with the liver which is to be found in the acquired and not in the congenital form is the condition of perihepatitis. I have not come across or met with in literature any indications of the development or presence of such a condition in the newly-born child; in the adult, more especially at the late stages, it is not very uncommon.

Out of the eight cases, I came upon it in a fairly extensive condition in a female of sixty-two, in which syphilis must have dated back for twenty years, more or less, for she gave a history of having seven children, of which five were miscarriages, and the other two died in infancy. Here the most extensive syphilitic changes were in the neighborhood of the longitudinal fissure and round the gall-bladder. An interesting point was the fact that a mistaken diagnosis was made of atrophic cirrhosis with ascites. The capsule of the organ was throughout thickened, the upper surface very smooth, the abnormal lobulation and puckering. Near to the gall-bladder in the right lobe was a caseous nodule the size of a filbert, showing some calcification on section.

Upon section, the organ showed a thickened fibroid capsule, many small central scars, caseous gummata, and more or less diffuse and apparently recent fibroid change. Here it should be added that, during the last five months of her life, she had been repeatedly tapped, and, following upon tapping, there was found at the autopsy a condition of sub-acute peritonitis with inflammatory lymph covering the intestines. Thus the perihepatitis might not have been entirely syphilitic, indeed, I am a little doubtful whether syphilis, pure and simple, will lead to the condition of generalized perihepatitis.

Case 5. Female, æt. 62, with a history of having had seven children, of which five were miscarriages and the other two died in infancy. The husband said to be phthisical. In 1895 Dr. Roddick removed an epithelial wart, which, on examination, was found to be non-malignant. Suddenly, upon July 31st, 1895, while the patient was feeling in good health, she had an attack of hæmetemesis, which was repeated next day and again two days later. It was accompanied by melæna and great weakness.

Upon admission to the hospital in August, 1895, under Dr. Stewart, the patient was sallow and there were dilated venules on the face. The liver extended from the fifth rib, two and a-half inches downwards; it was not palpable, nor could the spleen be felt; there was a low systolic murmur. The urine was high colored, with a trace of albumin. While in hospital epistaxis occurred once or twice. This history, together with the progressive loss of flesh, the sub icteroid tinge, the abdominal swelling with epigastric pain, the slight œdema of the legs, led to a diagnosis of atrophic cirrhosis of the liver; 270 ounces of fluid were removed from the abdomen, and after removal the fulness in the epigastrium was found to be due to the hard, large mass passing down to within 8 ccm. of the navel. This mass, hard and rounded, was continuous with the right lobe of the liver. The fluid re-accumulated and the patient underwent numerous tappings. She became progressively weaker, and the hepatic tumor appeared to be undergoing progressive diminution.

After having left the hospital she was re-admitted early in January, 1896, dying upon January 24th. The condition was thought to be one of atrophic cirrhosis with enlargement of the left lobe.

Autopsy. Œdema of the legs; extensive ascites with distended abdomen. Upon opening, the visible intestines were found coated with lymph; the omentum, which was fatty and œdematous, was adherent to the parietes in several places. The liver presented numerous adhesions, especially to the intestines and surrounding organs, specially in the region of the gall-bladder. The right lobe did not reach the costal margin, the left extended just below the xyphoid. The organ weighed 1,425 grams, its greatest breadth was 22 cm., the right lobe especially being contracted (breadth, 10 cm.); this lobe was also diminished from above downwards, its length being 15.5 as compared with 19 cm. of the left lobe. The capsule was thickened; the upper surface fairly smooth, with, however, linear indentations, but the under surface presented extensive abnormal lobules, especially in the region of the gall-bladder and upon the right lobe, so that several small lobules of liver tissue were produced, and near to the gall-bladder a caseous nodule the size of a filbert showed some calcification upon section. The under surface of the left lobe showed numerous cicatrices, some distinctly stellate. The largest was close to the longitudinal fissure, and was 3 cm. in diameter.

Upon section the organ showed many small central scars, caseous gummata and *more or less diffuse and apparently recent fibroid*

change. There was further a moderate amount of chronic passive congestion and cholelithiasis, with obstruction of the cystic duct. The organ gave no amyloid reaction, and the spleen was large, firm and tense, thickened capsule. In addition there was fat necrosis of pancreas, brown atrophy of the heart, moderate atheroma of the aorta, slight chronic pachymeningitis, emphysema and bronchitis.

It will be noticed that the most extensive syphilitic change was in the neighborhood of the longitudinal fissure and round the gall-bladder.

Yet another case of syphilitic liver with great thickening of the capsule showed this same complication of peritonitis. In this case (a patient under Dr. James Bell) there had been recurrent attacks of appendicitis during the last four years, with much chronic fibroid typhilitis, and the patient died of acute peritonitis following operation. Although the liver showed numerous stellate scars with abnormal lobulation, these were on the upper surface and there had been no signs of hepatic disturbance. There were in addition moderate arterio sclerosis and fibroid syphilis of the left testicle.

CASE 6. The patient a male, entered for recurrent appendicitis and died of acute peritonitis following the operation, Feb. 27th, 1896. Four years previously had had illness with symptoms of appendicitis. For five or six weeks before admission had dyspepsia, followed by right iliac pain beginning about Feb. 7th, kept at work till the 12th. Operation: Purulent appendicitis with perforation, followed by general peritonitis and death.

Autopsy. Acute peritonitis with evidence of much chronic fibroid typhilitis. Liver large, surface very irregular, owing to great irregular thickening of capsule. Weight, 2,000 grams, numerous large superficial stellate scars with abnormal lobulation; greatest thickening about longitudinal ligament in front. On section, fairly firm, a few small internal cicatrices; portal vein and vena cava free; periportal glands free. Liver showed large periportal fibrous glands with thickened arteries and atrophy of some liver cells. Spleen large, 155 grams, 12.5x6 5x3, firm, soft and rather pale. Pancreas, hæmorrhages and necrosis. Other organs showed evidences of the acute febrile disturbance with moderate arterio sclerosis and its effects; there was in addition fibroid syphilis of the left testis.

In the case of a male, æt. 75, the organ had the characteristically puckered appearance and showed upon the anterior surface of the right lobe a large convex cartilaginous plate, 9.5x7.5 cm., or about 4x5 inches, associated with chronic thickening of the capsule together with numerous small cartilaginous plates elsewhere; the

left lobe did not show much thickening of its capsule. The spleen, however, as is the rule in chronic perihepatitis, presented a much thickened capsule. (In this case there was very extensive gummatous hepatitis, with practically no clinical evidence of affection of the organ.)

CASE 7. Of this patient, a male, æt. 76, under Dr. James Bell, with cancer of the tongue and general arterio sclerosis, there is no history bearing upon the date of infection.

Autopsy. Emaciation; rheumatoid arthritis of fingers; slight icterus; retracted abdomen, abdominal cavity dry; liver 1,335 grams, 21x16x8 cm., right lobe anteriorly and inferiorly broken up into several small lobules; at hilus five or six small accessory lobules between a bean and a walnut in size. On anterior surface of right lobe, left superior angle, large convex cartilaginous plates 9½ by 7½ cm. associated with chronic thickening of capsule. Numerous small cartilaginous plates elsewhere on the right lobe, the left also broken up into several lobules. On section, organ fairly friable with here and there small fibrous strands of tissue intersecting collections of lobules. Spleen, capsule very much thickened, weight 240, enlarged 10.5 c 7.5x5 cm. On section, soft, with slight fibrosis. Other conditions: Cancer of tongue, arterio sclerosis, sclerosed heart valves and coronary arteries, hypertrophy of prostate, hydronephrosis, chronic interstitial nephritis, etc. (This case again shows very extensive gummatous hepatitis, with singularly little clinical evidence of the liver disease.)

In two other cases, there were localized adhesions between the organ and the diaphragm. These adhesions, however, bore no clear relationship to the areas of cicatrization in the organ.

On the whole, therefore, I am inclined to regard diffuse chronic perihepatitis as more a complication than a direct syphilitic manifestation.

There is one further condition of syphilitic disturbance of the liver in the adult to which I have only referred in passing, and that is the development of large tumour-like outgrowths of the organ which are so sharply defined that clinically the erroneous diagnosis may easily be made of malignant neoplasm. These growths are distinct from the bosses produced by the cicatrices of old gummata and subsequent deformity of the organ, and, under the action of potassium iodide, they appear to undergo fairly rapid absorption. Osler in the work already cited has described very clearly one of these cases. So far as I know, in the coarse lesion produced, there is nothing quite similar to this seen in congenital syphilis. Micro-

scopically, however, the mass shows a condition not unlike that seen in the circumscribed areas of fibrosis in the infantile liver. There may or may not be caseous or gummatous change in the centre. There is, however, much central fibroid change with complete destruction of hepatic parenchyma, and towards the periphery there is a more vascular connective tissue area in which strands of liver-cells are to be made out. The nature of the growth and the presence of these liver cells would appear to indicate that what we have to deal with in such cases is a focal syphilomatous change in which, as the process extends from the centre, there is, at the same time, a constant proliferation of the liver tissue, and thus gradually, there is the development of a localized mass of new tissue in the main fibroid, but at the periphery, where the change is not so extreme, there is growing liver tissue.

With this I have, I believe, mentioned the main manifestations of syphilis as they occur in the infant and in the adult, and it will be seen:

(1) In the first place that the lesions, occurring in the congenital and the acquired disease, are identical, and brought about by the same process or processes.

(2) That, whether we have to deal with the disease in the secondary or in the tertiary stage, the same processes are at work. That, if we accept those cases as truly tertiary in which we have to deal merely with the fibroid remains of obsolete gummata, and again those cases in which there is perihepatitis (which perihepatitis appears to be a complication rather than the genuine and direct resultof syphilis), then we are bound to admit that the study of the liver alone would indicate that no sharp boundary line can be made out between secondary and tertiary syphilis. No more can we make out such a boundary between secondary and tertiary tuberculosis.

While I and all others must admit the utility of recognizing these two stages, from an anatomical and histological standpoint one is forced to acknowledge that progressive syphilis is characterized by the same succession of phenomena whether it be studied but a few months or long years after the primary infection. Anatomically and histologically there is no valid distinction to be drawn between secondary and tertiary syphilis.

It may be asked whether such a conclusion is not wholly at variance with clinical opinion and experience? Upon the face of it, it is—but, if the subject be looked into carefully, I think that such a view will reconcile not a few of the divergences existing among

syphilologists. We have those (and they are the majority) who state that tertiary syphilis is non-infectious, and those who bring forward clear examples of the production of infection five or ten years after primary inoculation of the disease. This difference can be reconciled if we agree upon the following points:

1. That now-a-days, under proper treatment, syphilis, if not a self-limiting disease, is at least a disease which can be healed, so that many of the lesions recognized as being tertiary syphilis are truly the indications of the old healed syphilis, and not signs of progressive or latent disease.

2. If the disease has not completely died out, and remains latent, the resistance of the tissues of the organism is such that in the majority of cases, if it does not tend to light up again, there is so considerable a local reaction, that the infection and consequently the spread of the process tend to remain strictly localized, and the germs (which are probably of bacillary nature) do not become disseminated through the blood. Thus neither the blood nor the secretions contain the virus.

3. In a very small number of cases the reaction on the part of the tissues may be so lessened, and the virus retain or gain so high a virulence, that either it causes ulceration, or in other ways becomes disseminated and capable of causing infection even late in the tertiary stage.[1]

[1] After reading this paper Dr. C. A. Temple, of Toronto, brought to my notice an interesting example illustrating this point which he very kindly permits me to note here. The patient, a vigorous blonde, contracted the initial lesion five years before marriage, underwent mercurial treatment for four years, and later was treated by Fournier's intermittent method, generally for from six to eight weeks twice a year. His wife, a highly educated and cultured woman, never showed any symptom of syphilis. In the fifth year of marriage she became pregnant for the first time, and, ten years after the primary infection of the husband, she aborted at the seventh month, the fœtus showing the typical facial characteristics and a greatly enlarged liver. The husband had always tended to have syphilitic eruptions if he neglected treatment, and when last Dr. Temple saw him, after the abortion, there were scaling circinate lesions on the abdomen and groins and ulcerating patches, some ecthymatous, others healing, on both legs from the knee downwards.

ETHMOIDAL DISEASE.*

By Dr. R. Ovens, London.

ANATOMY.—Before entering into a detailed description of this disease of the ethmoidal sinus we will look at its anatomical structure and compare it with the other sinuses.

Location.—Mass on either side of septum ; may press septum. Middle turbinate part of the ethmoidal structure between the orbits. Os planum very thin ; separated from brain by thin plate of bone.

Orifices.—Anterior and posterior.

Structure.—Differs from frontal, sphenoidal, and antrum in being divided into two parts by solid septum of bone, and each part sub-divided into numerous small cells.

Diseased —In antrum and frontal require free opening to drain. This will not do for the ethmoid ; you must convert it into one cavity by completely breaking down the bony septum and all the cell walls.

Etiology.—Anything that will cause an attack of acute rhinitis (2) deflected septum, side of concavity diseased ; (3) la grippe, especially the influenzal type ; (4) ethmoid sinus is the most frequently diseased of the accessory sinuses.

Pathology.—Three stages recognized :

1. Extra-cellular myxomatous degeneration.
2. Intra-cellular myxomatous degeneration.
3. Purulent ethmoiditis.

The three conditions are stages of one and same disease. An acute inflammatory process of the mucous membrane lining those cells very soon results in resolution, or in a chronic morbid condition. Owing to the peculiar anatomical character of this membrane a chronic inflammation tends to develop a soft jelly-like thickening of the tissue, which becomes myxomatous in character. Now, this condition may persist for a somewhat prolonged period of time, giving rise to distension of the cells and a watery or muco purulent discharge.

*Read at the meeting of the London Medical Association.

Second stage.—This myxomatous tissue may crowd out of the ethmoid cells through the orifices and appear like small polypi in the nasal cavity.

As a result of this inflammatory process in the cells, the thin-walls become distended, and we have a somewhat curious development by which the outer wall of the cells yields before the pressure, and we have the middle turbinate bone crowded outward and gradually an extension of these cells into its body (as seen in this specimen).

The entire mucous membrane of the middle turbinate undergoes this myxomatous degeneration.

Third stage.—Suppuration characterizes this condition. Suppuration may develop very early or very late in the course of the inflammatory attack, a great deal depending on adventitious circumstances. The inflammatory process within the cells gives rise to distension by intra-cellular secretion, which results in closure of the normal ducts. The result is the formation of an acute abscess, which, failing resolution, develops into a chronic abscess or chronic suppuration. The pus makes its way into the nasal cavity through one of its normal openings either in front into the infundiblum or into the superior meatus through the posterior opening.

The pus does not invariably make its way into the nasal chamber.

We frequently find it breaking through the os planum into the orbital cavity, giving rise to exophthalmos and orbital disease.

Case. Mrs. Ross, Journal article, 1894.

Exophthalmos may be produced by distension of cells in to orbital cavity without the escape of pus. As the result of persistent suppuration we may find necrosis of the septum and cell walls of ethmoid. But I believe necrosis does not occur as frequently in this region as it once was thought to.

Symptoms.—First stage—Are those of acute rhinitis, together with those of a more or less neurotic character, as watery discharge from nose, violent sneezing, asthma, headaches, neuralgias. You will frequently meet with cases that, after the acute rhinitis is apparently better and the nasal chamber shows no perceptible pathological lesion, the patient still complains of nasal stenosis, frontal headache, intra-orbital pressure, watery discharge, etc. These were according to "old teaching" set down as "reflex in character." On careful examination you will find these so-called "reflexes" are due to an inflammatory condition of the mucous

membrane lining the ethmoid cells. Both acute and suppurative cases can be traced to an unmistakable attack of "La Grippe."

Second stage.—The intra-cellular pressure gives rise to a peculiar train of symptoms as watery or muco-purulent discharge, violent attacks of sneezing, headache, aching pains across the bridge of the nose, intra-orbital pressure, asthenopia, muscular weakness of the motor apparatus of eyes. *Aprosexia.*—If neurotic—hay-fever and asthma (aprosexia—blanket over the brain—cannot think—absent-minded). All these symptoms are exaggerated at every fresh outbreak, which become more and more frequent as the disease progresses.

CASE. J. M., æt. twenty-three years. Asthenopia and headache, from compression of septum by hypertrophy of middle turbinate—cannot use eyes, sense of weariness, eyes tired, constant desire to keep them closed, constant headache for five years. Jewellers and quack expert refractionists used atropine, glasses and prisms.

Inspection of nose.—Septum to right, large ovoid mass filled left nares in middle fossæ. Cocaine caused no diminution, removed with snare with complete cessation of symptoms.

The crowding out of this myxomatous tissue and the extension of the cells into the body of the middle turbinate. When this occurs it is very manifest on ocular inspection. This distension and extension of the cells into the middle turbinate gives rise to a protuberance into the middle meatus which is easily recognized, the middle turbinated body presenting as a rounded ovoid mass, usually in contact with the septum and encroaching on the middle meatus of the nose.

At the same time this curious myxomatous degeneration of the mucous membrane of the cells conveys itself to the mucous membrane covering the middle turbinated body, and lends additional aid in determining the disease.

Symptoms.—Third stage—Suppuration may develop very early or late in the case. On ocular inspection we may find the pus making its appearance either from beneath the middle turbinated body or from between the middle turbinated body and the septum above. As a rule the pus from the anterior ethmoidal cells makes its way into the middle meatus, and is expelled through anterior nares, while the discharge from the posterior opening makes its way into the pharynx, giving rise to symptoms so often complained of, viz., that of a dropping in the throat, in which way the disease may be confused with ordinary naso-pharyngeal catarrh. The secretion of the latter is muco-purulent and hard to remove and causes a

great deal of hawking and cough, but where we meet this symptom look carefully for empyema of ethmoid cells or sphenoid sinus.

Treatment.—That treatment should be instituted early in the history of the disease, and before the suppurative process has ensued, need not be urged, in view of the very serious discomfort and even danger which attends the stage of empyema, and the great difficulty with which it is brought under control after pus formation has become chronic.

Acute Stage.—Treat same as acute rhinitis. Douche most potent—One to two gallons of hot saline solution at least twice daily. Patency of nostril—Have douche to enter the most obstructed side.

Second stage.—Intra-cellular—Surgical interference in all cases, other measures failing, tendency is to get worse; imminent danger of suppuration. Where there is a swollen condition of turbinated body, turgescent and myxomatous degeneration of its mucous membrane and swollen and distended state of the ethmoid cells, we should operate. The object is to remove intra cellular pressure and this is accomplished by uncapping, as it were, the ethmoid cells. The steel wire loop of the Jarvis or Bosworth snare is easily slipped over the projected turbinated body and the whole mass removed, presenting usually in the form of an ovoid shell. This also reveals to us the condition of the mucous membrane within the ethmoid cells, which may be either in a simple state of turgescence, or a soft, gelatinous mass of myxomatous tissue, filling the cavity thus opened.

The pus formation cannot be cured with lotions, etc. You must uncap the cells, and convert the large number of small cells into one cavity. This is best done with a dental burr with dental engine; the trabeculae and cell walls are easily broken or burred down. The chief dangers are injury to the adjacent brain, or entrance into the orbital cavity. It is better to repeat operation several times, and move cautiously. During intervals keep the cavity open by swabbing it out carefully once a day, and thoroughly applying some disinfectant lotion.

INFANT DIET.*

By Dr. W. J. Greig.

IT is conceded by all that the healthy milk of a healthy mother is the proper food for an infant for the first nine or ten months of its life. The causes which would make weaning necessary during that time are:

1st. Pregnancy.

2nd. Acute or chronic disease of a serious nature.

3rd. Mastitis of both breasts. On no account must a child be allowed to drink milk containing pus.

4th. Continuous and progressive loss of weight for several weeks. An examination of the mother's milk may reveal the cause of this to be a milk insufficient in quantity or defective in quality. These faults may be corrected by a change of diet or of habits.

Assuming that for any of these causes weaning becomes necessary, the question at once arises "What shall we feed the baby?"

Under the name of "infant foods" the market is full of proprietary preparations, each of which claims to be a fit and proper food for the baby. It is evident that to be such they must resemble mother's milk in composition. That the resemblance is not a close one is shown by the fact that they nearly all contain starch. The baby has little saliva until the fourth month. The quantity gradually increases, notably so when the teeth come. But this saliva is not active in changing starch into sugar, as it contains a minimum quantity of ptyalin. Therefore, starchy foods before the fourth month are quite indigestible, and after that time they can be disposed of in very small quantities.

In addition to this, children brought up on these foods are very liable to develop rickets, scurvy and symptoms of mal-nutrition. Holt states that "where these prepared foods are given for any length of time to the exclusion of everything else, some of these conditions will develop with very great regularity. And when they do not, it is because the food has been given with fresh milk."

*Read at the Ontario Medical Association, June 1st, '98.

As articles of infant diet these foods can be dispensed with as unnecessary, as expensive, and as inferior to properly modified cow's milk. They should receive no more consideration from the physician than proprietary and patent medicines do. In the past, scientific surgery rescued the treatment of fractures and dislocations from the bone-setter; scientific obstetrics has rescued the practice of midwifery from the hands of the midwives. Inaugurated a few years ago by Rotch, of Boston, a strong effort is being made by a scientific study of the present subject to rescue "infant feeding" from the hands of the manufacturer of infant foods of different kinds. It is certainly the duty of all physicians to assist as much as possible.

I would refer to condensed milk only to say that while it contains no starch, it does contain an excessive amount of sugar and is very deficient in fat.

The same results will follow its exclusive use as in the case of proprietary foods. A child fed on this milk may look fat and plump, but it will be very anaemic and be deficient in the resisting power to disease.

Cow's milk is at once the cheapest, the most available, and the most suitable substitute for mother's milk. The differences between the two can be readily seen by reference to the following table, which is the average of a large number of analyses:

	Mother's.	Cow's.	8 per cent. cream.	12 per cent. cream.	16 per cent. cream.
Reaction.	Alkaline.	Acid.	Acid.	Acid.	Acid.
Fat.	3 to 4 per cent.	3·5 per cent.	8 per cent.	12 per cent.	16 per cent.
Sugar.	6 to 7 "	4·3 "	4·3 "	4· "	4· "
Proteid.	1 to 1·5 "	4· "	3·9 "	3·8 "	3·6 "
Salts.	·2 "	·7 "	·7 "	·6 "	·6 "

The difference between mother's and cow's milk is one not only of percentages, but also in the character of the proteids. In cow's milk three-fourths of the proteids are in the form of an insoluble casein in suspension, and easily coagulable, while, in mother's milk, two-thirds of the proteids are in solution as lactalbumin and non-coagulable. For this reason, and also because they are largely in excess in cow's milk, the chief secret of success in feeding infants on cow's milk is to reduce the percentage of proteids to an even lower one than what is contained in the milk of the mother. How can this be done?

Not by a simple process of dilution, as that would reduce all the other elements *pro rata*. Look for a moment at the percentages of the creams as shown in the above table.

An eight per cent. cream is so called because it contains eight per cent. of fat, and is the cream which rises on a fairly rich sample

of milk if allowed to stand in a cold place for four hours. Twelve per cent. cream contains twelve per cent. fat and will rise in a fairly rich milk in six hours in the cold.

Notice that these different cream milks differ from cow's milk practically only in the amount of fat present. Notice, also, the proportions of fat to proteids in each of the above tables.

	Fat.	Proteids.
Mother's milk	4 or 3 per cent.	to 1.
Cow's milk	1 "	" 1.
Cream, 8 per cent.	2 "	" 1.
" 12 "	3 "	" 1.
" 16 "	4 "	" 1.

To produce from one of the cream mixtures a preparation practically identical with mother's milk, take 12 per cent. cream mixture and dilute it twice, *i. e.*, one part cream and two parts water.

12 PER CENT. CREAM.

Fat.....12 per cent. Sugar.... 4 per cent. Proteids..3.9 per cent.	divided by three	4 per cent. Fat. 1.3 per cent. Sugar. 1.3 per cent. Proteids.

Which is approximately the same as mother's milk, excepting in the amount of sugar present. Notice that the fats and proteids are in the proportion of 4 to 1.3 or 3 to 1. And no matter how we may dilute this 12 per cent. cream, the proportion will always be the same. Possibly the child may be able to get along with less fat, in which case, if it is necessary to give less proteid this same 12 per cent. cream diluted three times instead of twice may be used. But if 4 per cent. of fat must be kept and the proteids reduced to 1 per cent. or less, it will be necessary to take a cream mixture richer in fat. Supposing we wish to obtain 4 per cent. of fat to 1 per cent. of proteid, take the 16 per cent. cream and dilute three times, *i. e.*, one part of cream and three parts of water.

16 PER CENT. CREAM.

Fat.....16 per cent. Sugar..... 4 per cent. Proteid....3 6 per cent.	divided by four	4 per cent. Fat. 1 per cent. Sugar. .9 per cent. Proteids.

Here we have approximately the percentage required. If the principles which I have endeavored to indicate are kept in mind, almost any useful formula can be produced from plain milk or the different percentages of cream. Always bearing in mind the fact that the proteids of cow's milk are less soluble than those of mother's milk, and that therefore in giving the baby cow's milk or cow's cream, it is always wise to begin with a low percentage of proteids, ½, ¾ or 1 per cent.

Now as to the sugar in these preparations, which is also a very important constituent. Mother's milk contains from 6 per cent. to 7 per cent. of sugar; cow's milk and the different creams practically 4 per cent. Therefore when cow's milk or the creams are diluted, the amount of sugar present is very small. We want to raise it to 7 per cent. Therefore use as your diluting agent a 7 per cent. solution of milk sugar in distilled water. Or if the dilution is less, and leaving, say, 2 per cent. of sugar in the milk, use a five per cent. solution of milk sugar. This sugar percentage is easily obtained, ℥ss. of milk sugar to the ℥i. of water being approximately 7 per cent. It should be mentioned that sugar is not added simply to sweeten, but as an essential for the nutrition of the child.

The necessary alkalinity is obtained by adding ℥iss. of lime water to the quart.

The next question is, what are the clinical indications for the use of the different percentages of fat, sugar and proteids?

Proteids are necessary to life, for they replace the continuous nitrogenous waste of the body. Without them, growth will not take place. In giving cow's milk it is necessary to give a very low percentage at the beginning, for reasons mentioned before. If too high a percentage of proteids is given, indigestion will result, with colic and the passage of curds in the stools. If you do not give enough proteids the child will not thrive, *i.e.*, there will not be a progressive gain in weight, or there may be a loss.

Fat is also an important element in the food. It diminishes nitrogenous waste, and acts as a laxative. If too high a percentage is given indigestion will result, with regurgitation and diarrhœa as symptoms. If too low a percentage, constipation will occur, with symptoms of malnutrition. The child will not thrive. Fat is present in the mother's milk in the high proportion of 3 or 4 to 1 of proteids, therefore the infant in the early months of its life should receive a comparatively high percentage of fat with a low percentage of proteids.

Carbohydrates in the form of milk sugar must be freely supplied to the child, taking the 7 per cent. in the mother's milk as a guide to the quantity. If sugar is given too freely the child will become fat very quickly, be anæmic, and be very liable to develop diseases of malnutrition. This is practically what occurs in infants fed on condensed milk.

The indications, then, for regulating the percentages during the first few months are 3 or 4 per cent. of fat, 1.5 per cent. or less of proteids, and 7 per cent. of sugar; remembering that these per-

centages may require temporary modification for a variety of reasons.

To illustrate the practical working of this scheme, take a child at the age of two months for whom it is necessary to provide a food. Each feeding would consist of ℥iiiss. of milk given at intervals of 2½ hours during the day ; or eight feedings during the twenty-four hours ; that is ℥xxviii. of milk would be required. The percentages needed by a healthy child of that age would be approximately :

Fat.....	4 per cent.
Sugar.....	7 "
Proteids....	1·5 "

or a proportion of fat to proteids of 3 to 1. The proportion of fat to proteids in 12 per cent. cream is 3 to 1. And 12 per cent. cream diluted twice will produce exactly the formula we require. Therefore we must obtain enough 12 per cent. cream to produce when diluted ℥xxviii. of food. This ℥xxviii. is made up in the proportion of 1 part cream to 2 parts water. Therefore we will require ℥ix⅓ of cream and ℥xviii⅔ of a 7 per cent. sugar solution. Eight sterilized feeding bottles are now obtained ; ℥iiiss. of this diluted cream is put into each bottle. They are then submitted to a heat of 160° F for half an hour ; in other words the milk is Pasteurized, and you have a baby's food prepared in accordance with the most approved method.

This is practically Holt's scheme. Rotch inaugurated the method, and in his book, Pediatrics, he made the matter very clear, yet he did not outline a plan by which the practitioner could prepare these formulæ for himself. In his book, he simply gave a large number of formulæ, prepared to suit a large number of possible cases. These it was necessary to remember. Holt, following in his footsteps, went further and developed this plan, which if remembered will enable the practitioner to work out his own formula. When you have mastered the method it is just as easy to write out a suitable formula as it is to write a prescription for a cough mixture. Unless you deliberately go to work and master it, it will be of no use to you. Since Holt's scheme has been published quite a number of others have been printed in the journals. One of these was based on the decimal system, and as such the calculations were simple, but the metrical system was also necessarily used, and this detracted from its value as a popular method.

Selected Articles

A CONTRIBUTION TO THE STUDY OF HYSTERIA IN THE MALE.

By Dr. Silvio Ciarrocca.
University of Naples.

(Continued from July number.)

THE variety of the symptoms observed in my patient, and their changeableness, give additional proof of the identity of the neurosis in the two sexes, both as regards its fundamental features and also as regards the succession of the phenomena dependent on the neurosis; and, in truth, in our case there have appeared almost all the chameleon-like qualities of the affection, from the narrowing of the visual field to the disassociation of the cutaneous sensibility, from tremor to contracture, from visceral anæsthesia to vaso-motor disturbances, from sensations of pain, entering the psychical field, to the attempt to commit suicide.

As for the insomnia, with which the disturbances in our patient began, various authors have lately dealt with this subject with special precision. Herzen (1887) says that the brain is like a gasalier: when all the jets are burning one is awake; when all are extinguished we have natural sleep; when one only is burning we have hypnotism.

S. de Sanctis (1896), in his recent study, says that disturbances of sleep are frequently seen in hysteria, but does not undertake to interpret them. According to P. Sollier (1897), hysterical patients suffer from insomnia at night, because they are constantly plunged in a pathological sleep, which keeps them from sleeping normally; this state is nothing else than somnambulism, or, better, "vigil-ambulism," and all the symptoms and stigmata of hysteria would be but phenomena of this particular condition of the brain.

Without claiming to throw any light on the subject, I limit myself to stating that, in my patient, sleep followed all the oscillations of

the disease, even to failing completely when the manifestations of the disease were more profound and more numerous; so that the disturbances of sleep seem to be connected with the disease in the same way as the other symptoms. Among these latter, I mention specially the involuntary loss, of short duration, of the fæces and urine. When this symptom accompanies motor and sensory disturbances in the lower limbs the diagnosis may be made difficult, owing to the resemblance to myelitis. In my opinion it is due to the diminished sensibility of the mucous membrane of the anus and urethra, which has been observed, amid the manifestations of the hysterical neurosis, like that of the other mucous membranes (Raymond). Therefore, while the sensibility of the sphincter of the anus and of the neck of the bladder is such as not to give rise to true incontinence, yet it is not perfect enough to cause consciousness of the need of defaecation and micturition. The stasis of blood in the lower limbs and the excessive flow of saliva, as seen in our patient, are regarded as vaso-motor disturbances, which, besides, are not rare in hysteria, so that they alone may form a large part of the picture (Waton, 1892). It is to be noted, however, that the increased salivary secretion was conjoined with a diminution in the quantity of urine, so that there was a physiological compensation. Similarly, hysterical polyuria is, in the greater number of cases, accompanied by polydipsia and by a lessening or complete cessation of other secretions. So also the furfuraceous desquamation of the skin is not to be here regarded as a primary trophic disturbance, since it followed the stasis in the lower limbs and represents the result thereof. Indeed, it is almost always seen when the nutrition of the superficial layers of the skin is altered owing to various hyperæmic conditions.

The stammering, already observed by Ballet and Tissier (1890), is due largely, according to Pitres, to a spasmodic contraction of the phonetic muscles. To this cause he attributes many disturbances of speech in the hysterical. But the fact that, in our patient, the phenomenon is in complete relation to the greater or lesser affection of the psychical processes, makes me claim that its manifestation is accompanied by the diminished tension of the nervous wave which empties itself into the motor centres of language with force insufficient to determine the synergistic contraction of the muscles intended for the articulation of speech. There happens then what is noticed in children when they repeat a lesson not learned by heart, that is, to fill up, by lengthening out and repeating the last syllables of the previous word, the mnemonic gap and the want of association.

What results then, clearly enough, from my observation is the constant association of sensitive disorders, more or less generalized, with the various symptoms, as if the alteration of the sensibility were the condition necessary to their manifestation. All the authors who have studied the hysterical neurosis thoroughly have observed that in the cases of hemi-anæsthesia it is on the anæsthetic side that appear almost constantly the various hysterical phenomena, and that the anæsthesias are wanting in almost five out of ten cases of hysteria (Pitres).

P. Sollier, in his work above referred to, brings forward a large number of observations, which would show how the simple functional changes in the receptive centres of the cortex are capable of producing all the disturbances which appear in the very complex picture of hysteria. He, too, is inclined to recognize in the cortical superficies, special centres, which preside over the functionality of the organs pertaining to vegetative life—a thought put forth also by our Prof. Bianchi, in one of his recent lectures on cerebral localization.

Without entering upon the discussion pertaining to the localization of the dynamic disturbance which produces hysterical anæsthesia, the fact which the study of cerebral localization has brought to light, the relation, that is to say, of topography between the zones of a motor nature and the sensitive zones, besides their close physiological relation, would be, I think, sufficient to explain how the functional changes in the sensitive areas can determine disturbances of the centrifugal current, from tremor to the most complete paralysis, in proportion to the intensity of these changes. If indeed we imagine that the registering centres of the tactile images, of the muscular, of those which come from the tendons and from the articulations of a limb, or of any section of the body, are affected ever so little, voluntary movement is no longer possible; just as we cannot speak if all the images which preside over the complicated function of language are exhausted.

It seems to me we can explain in an analogous manner the disorders of the psychical field, which our patient has presented. The melancholy depression, the short periods of somnambulism, the slight and intercurrent attacks of amnesia, the short periods of mental confusion, appeared together with the other sensory, motor, vasomotor, visceral phenomena, and disappeared with them, so as to seem, I might almost say, a result of these latter. The more exalted psychical functions are developed, as Bianchi has shown (1895), in the frontal lobes, which form the last station in which converge,

modified by the intermediate neurons, all the impressions arising from the working of our organs, all the images, sensorial, sensitive, kinæsthetic. There takes place the synthesis of all these diverse elements from which the personality results, and it is from the combination of them that arise ideas and sentiments. If, then, these images are not sent from their depositing centres (through changes whose nature I do not discuss), or if they are sent incompletely, that is to say, in such a way as to change the physiological harmony, then it will follow that the mode of reaction of this part of the brain, all the more delicate because of its greater functional dignity, will be disturbed and the synthesis defective. Moreover, in the same manner as sensation is not possible if the stimulus does not attain a given intensity and a certain duration, so the more complex nervous phenomena of a psychical nature are not produced if the various elements of which they are the resultant have not the necessary energy and the required initial velocity. Memory, attention, consciousness, personality, will, are not primordial functions like motility and sensibility. The former need various elementary components for their constitution, and it is owing to changes in the latter that they are disarranged.

In our patient the depression is a reactive effect of the altered function of the nervous system. The brain behaves, I might almost say, as the other viscera. To our consciousness in general there is present only the finality of all its working, not the single units from which thought results. If in the formation of the latter, or in the unfolding of intelligence, there arise qualitative or quantitative disturbances, and we are conscious of these, we have the painful depression, in the same manner as one is gloomy when digestion or intestinal peristalsis is not physiologically performed. The patient observes that the physiological harmony of his organism is disturbed, and therefore the tonality of the *ego* is lowered. As soon as the disorders of cutaneous and visceral sensibility disappear, as soon as the dynamogenesis of the nervous elements is re established, the individual again becomes calm and regains confidence in his recovery.

The attempt to commit suicide depends on a fixed idea, which, dominating all the others, empties itself through the motor centres, and these act in consequence. That he attributed to the devil the command to take his life may have been an interpretation of the fact, since it is a popular thought, partly due to bringing up and to religious beliefs, that every individual's good actions are determined by the *dio del bene*, and his bad acts by the *dio del male*.—*Translated from Giornale Internazionale delle Scienze Mediche, for the* CANADIAN PRACTITIONER *by* DR. HARLEY SMITH.

THE MEDICINAL TREATMENT OF TUBERCULOSIS.

By Hector Mackenzie, M.D., F.R.C.P.,

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At the present day the tendency is rather to make too little than too much of medicinal treatment in tuberculosis. Climate, hygiene and diet are remedial agents which are far more powerful than any drugs, but an important lesson to be learnt from out-patient practice at a large hospital for consumption is that medicine can do a good deal to influence the course of the disease and to improve the patient's condition under very unsatisfactory circumstances as to food, climate and general environment. Drugs may become unnecessary when other powerful influences such as those mentioned can be brought to bear on the disease, but the usefulness of medicines is undoubted with the ordinary conditions under which the disease is met with in this country.

The discovery of the bacillus tuberculosis by Koch was immediately followed by attempts to apply this discovery to therapeutic purposes. The idea which first suggested itself was to administer various substances possessed of antiseptic or bactericidal properties, in the hope that they might kill the bacillus in the body. But although a large number of substances were proved to be able to kill or attenuate tubercle bacilli as cultivated in artificial media, it was found to be a very different matter when they were employed to attack the bacilli in the body of an animal. Little help in treatment has so far been afforded by the attempts to treat the disease in this way.

Dr. Sims Woodhead has elsewhere described the efforts which Koch and others have been making to obtain something of the nature of an antitoxin. All we know of the disease is not very encouraging to the hope that an efficient antitoxin will be obtained. In the case of some diseases, such as the specific fevers, the individual acquires immunity through successfully passing through an attack of the disease. So far is this from holding in the case of tuberculosis

that the reverse might be asserted with truth—namely, that susceptibility is increased once the bacillus acquires a successful footing in the body.

Neither in the local and chronic nor in the general and acute forms of the disease does any sign of immunization ordinarily appear. Koch believes, however, that in certain cases of acute miliary tuberculosis an immunization against the bacilli does occur, although too late to be of benefit to the body attacked. He has pointed out that in the course of acute miliary tuberculosis a certain stage sometimes occurs in which the number of stainable bacilli greatly diminishes, a fact which is the more remarkable because ordinarily dead bacilli are absorbed very slowly indeed. This disappearance of a large number of the bacilli is looked on by Koch as a sign of immunization resulting from a rapid inundating of the body with micro-organisms which have been absorbed or digested. He infers that the reason immunity does nor ordinarily occur is because the bacilli attain their development only in small numbers in the body, being there environed by dead tissues, and only becoming absorbed long after when they are dead and are profoundly altered, or, as more commonly occurs, being eliminated unchanged from the body without any absorption at all.

Working out this idea, Koch was led to the discovery of the various forms of tuberculin elsewhere described. The failure of the old tuberculin as a curative agent is now a matter of ancient history, nor can it be said that the reports as to a curative action of Tuberculin R. are at present any more encouraging than those of the older product, while both local and general reactions have been frequently met with after treatment with the newer tuberculin.

It is not necessary to add anything to what Dr. Sims Woodhead has said as to the use of anti-tuberculous serum, which is still in the experimental stage. The results so far obtained are not sufficiently conclusive to justify an extended use of any of the sera so far prepared. For the present we must be contented with simpler remedies, and, accordingly, we propose to give a short review of the principal medicinal agents which are now in use.

In the medicinal treatment of pulmonary and other forms of tuberculosis, each case must be carefully considered in all it bearings. Frequently at the time the patient seeks advice the appetite is poor, the digestive powers are weak, and the bowels act irregularly. In such cases great good can often be done by the administration of an alkali in combination with a bitter infusion before meals. A mixture containing 15 grains of bicarbonate of soda and 3 minims of dilute hydrocyanic acid to an ounce of compound infusion of

gentian is largely prescribed at the Brompton Hospital. A simple mixture of this kind often does much to restore the appetite and improve the powers of digestion, and thus paves the way for other remedies.

The bowels are often constipated and an occasional aperient is necessary. Aloes and cascara sagrada are the most useful remedies, and pills containing one or other of these ingredients in combination with nux vomica and belladonna may be prescribed, to be taken at bedtime. If the bowels are loose the subnitrate, the subgallate, or the carbonate of bismuth may be ordered along with a few drops of tincture of opium, or of the tincture of chloroform and morphine. On the whole, except in the later stages, and when ulceration of the intestine has occurred, constipation is more usual than diarrhœa.

Cod-liver oil has now for half a century played a leading part in the treatment of tubercular diseases in general and pulmonary tuberculosis in particular. Although used as long ago as 1772 in the Manchester Infirmary as a remedy for chronic rheumatism, it was not until about the year 1841 that it really came within the sphere of practical therapeutics, when Dr. Hughes Bennett, of Edinburgh, advocated its employment in the treatment of gout, rheumatism and scrofula. How little was known of it previously is shown by the fact that a writer in the *London Medical Gazette* in 1839, referring to the use of oleum jecoris aselli in Berlin, said it was unknown to what ingredient ass' liver oil owed its efficacy, but perhaps it was to the presence of a small quantity of creosote !

Cod-liver oil improves the condition of the blood, and patients previously anæmic often regain a healthy color under its administration. It promotes nutrition and metabolism, and has a tendency to cause the deposition or formation of fat in the body. Its action in tuberculosis is probably altogether an indirect one, depending on the improved condition of the blood and general nutrition which it brings about. Dr. C. J. B. Williams, from an experience of forty years, concluded that cod-liver oil was a most powerful agent in the treatment of phthisis. In the first decade of this period of forty years the beneficial effects of treatment were very limited, and were chiefly confined to incipient cases, life being rarely prolonged beyond the duration of two years. In the next decade a marked improvement took place, apparently in connection with a more liberal diet and the use of mild alterative tonics. During the latter twenty years, with the introduction of cod-liver oil, the average duration of life in phthisis was quadrupled—raised from two to eight years.

It is generally in text-books that cod-liver oil consists of

olein, palmitin, and stearin, with traces of iodides and biliary principles. The glycerides mentioned are those which form other animal fats, such as mutton suet, goose grease, or lard, the firmer fats having a larger proportion of palmitin and stearin, the softer more olein. The question at once arises, Why, if cod-liver oil consists of the same bodies as other animal fats, should it be therapeutically so much their superior? Very various answers have been given to this question. Some have said that on account of the presence of biliary principles, cod-liver oil is more easily assimilated and digested than the other fats. It is contended, however, that neither bile pigments nor bile acids are really present, and that the play of colors observed when a drop of sulphuric acid is added to a few drops of the oil on a porcelain slab is due to the presence of cholesterin, a peculiar pigment called lipochrome, and fatty acids.

Others, again, have alleged that the beneficial action of the oil is due to the iodine it contains; but the quantity actually present is extremely minute, never exceeding one part in two thousand, and it is extremely unlikely that such small quantities of iodine could impart any special virtues. Still another view is that the oil contains certain active principles, which some have actually attempted to separate from the oil itself.

Certain researches by Heyerdahl seem to show that cod-liver oil has a much more complex composition than was previously believed, and that there is neither olein nor stearin in the oil, and only four per cent. of palmitin, while two very unstable glycerides, which have been called therapin and jecolein, are each present to the extent of twenty per cent. The composition of cod-liver oil is therefore something *sui generis.*

There is, unfortunately, a great tendency in cod-liver oil to the formation of hydroxy-acids, bodies not only actually injurious in themselves, and very apt to set up gastric disturbances, but imparting to the oil a nauseous taste.

It is very important, therefore, that great care should be exercised in the manufacture of the oil, and that the livers used should be fresh and carefully selected. The best oil will, however, become rancid when exposed to the air for some length of time.

At the present day cod-liver oil is probably in much less favor as a remedy than it was formerly. The amount of oil consumed by the patients at the Brompton Hospital has greatly diminished, and the quantity used by others than hospital patients has probably become still more restricted. I am, however, old-fashioned enough to believe that it is one of the best remedies we possess for the treatment of chronic cases.

The dose and mode of administration are matters of considerable importance. As to the dose, opinions have varied considerably. The practice at the Brompton Hospital is ordinarily to give it in doses of one or two teaspoonfuls twice a day. Larger doses are seldom given. Jaccoud was of the opinion that the best results were obtained by the administration of doses of from two to three tablespoonfuls three times a day. We do not consider that such large doses are necessary or beneficial. The oil should not be given on an empty stomach, but either along with or after food. Some patients can be induced to take the oil with orange wine when they will not take it by itself.

A great variety of modes of administration have at one time or another been introduced. Flavorings such as eucalyptus, cocoa, anise, etc., have been added, but were not found to improve it. It has been made into a liniment with limewater and syrup, into a jelly with gelatine, or into a compound with iron, ozone, chloral, or creosote; but all of these have proved unpalatable. Two forms of preparation have met with great success—at all events, as far as the manufacturers are concerned. These are emulsions with gum acacia, tragacanth, sugar, hyphophosites and water, and mixtures with malt extract. The former contain at the most sixty-six per cent. of oil, but frequently not more than fifty per cent., and sometimes not more than twenty-five per cent. The latter contain from fifteen to thirty five per cent of oil, with malt extract and water. Some of these are erroneously called solutions, because the separate globules of oil cannot be detected with the microscope. This depends, however, on the fact that the index of refraction of the oil and that of the malt extract are nearly the same. The addition of osmic acid will at once show that there is no real solution.

Many patients will take emulsions who will not take the plain oil, but, on the other hand, some much prefer a pure oil to any emulsion. It should always be pointed out to patients that the dose of the emulsion is twice as much as that of the oil. Apart from the question of palatability, there is no reason to suppose that an emulsion has any advantage over the unsophisticated oil, and the question of palatability must be left to the patient to decide. The preparations with malt extract stand on a somewhat different footing from emulsions, for malt extract has some nutritive value which gum, sugar, and water do not possess. Malt extract, moreover, fairly well masks the taste of the oil. The only objection is that the preparation is generally so dilute in cod-liver oil that a tablespoonful is probably the equivalent of a teaspoonful of the oil.

Malt extract alone cannot be regarded as a satisfactory substitute for cod-liver oil, but, on account of the diastase it contains, it helps to digest starchy food, and if taken with meals may be useful when the digestive powers are weak.

Glycerine has some nutritive value, but, although sometimes given instead of oil, forms a poor substitute for it. It may, however, be given occasionally during hot weather, when oil is apt to disagree. One to four drachms may be taken three times a day.

Among other substitutes for cod-liver oil, pancreatic emulsion and petroleum emulsion may be mentioned. The former is fairly palatable, and the latter is tasteless; and both appear to exert a favorable influence over nutrition. The petroleum emulsion seems to have a soothing action on the irritable pharyngeal condition, and, in this way, helps to relieve cough, and, in some cases, it certainly appears to assist digestion.

Creosote, although discovered in 1830, did not attract much attention as a remedy for tuberculosis until 1877, when Bouchard and Gimbert published their paper on the use of creosote in the treatment of pulmonary phthisis. They insisted that only beechwood creosote should be used, and attributed the indifference with which the drug had previously been regarded to the impure form in which it had been employed, and to the attempts to use a very feebly volatile body by inhalation.

When creosote was administered internally, Bouchard and Gimbert observed first a diminution of the expectoration and cough, and later a return or improvement in the appetite, a diminution or cessation of the fever, and a return of strength. Night sweats also gradually disappeared after some weeks of treatment. Their observations have been amply confirmed by later experience.

Professor Sommerbrodt in 1887 published the results of the treatment of some 5,000 patients with creosote, and concluded that the drug was possessed of a specific action in tuberculosis. He obtained the best results in young subjects and in early cases, and he advocated the employment of gradually increasing doses.

While few probably are prepared to admit that creosote has a specific action, most of those who have had a large experience of the drug will admit that it has very valuable properties in the treatment of tuberculosis. The purest beech creosote should be employed. It should at first be given, preferably in the form of capsules, in doses of 1 to 5 minims, three times a day. The dose may be increased to 10 or 15 minims. If under its administration

the appetite comes back, the cough and expectoration diminish, the fever abates, the night sweats cease, strength returns, and nutrition improves, the object with which the drug has been given will be attained, and happily these are the effects which are often observed.

The remedy should be taken after food. It has a disagreeable taste, and, if it is not administered in the form of capsules, it may be given milk, which is perhaps one of the best vehicles. Dr. Clifford Beale has lately been giving creosote dissolved in cod-liver oil, in which form he has found it to be well tolerated. Beginning with doses of 3 to 5 minims, he has gone up to doses of 50 or 60 minims three times a day, and speaks favorably of the effect of such large doses on the condition of the patient.

Guaiacol has of late years come into favor as a substitute for creosote, of which, indeed, it is the principal constituent.

Guaiacol is a methyl ether of pyrocatechin, and, as ordinarily met with, is a colorless highly refracting liquid, freely soluble in oils and ethers, but sparingly so in water. Its taste and odor are less disagreeable than those of creosote. It is given in the same doses and mode as creosote. Apart from the fact that it is more readily borne by the stomach—certainly a very important matter—it does not appear to have any very special advantages over creosote, while it is much more expensive.

Guaiacol has recently been given in very large doses—60 minims three times a day—by Dr. Edward Squire, in the form of capsules, or as an emulsion with glycerine and tincture of orange, not only without toxic effects, but with apparent benefit, although the patients complained of the emulsion burning their throats, and sometimes objected to swallowing so many capsules.

Two additional modes of administering guaiacol may be mentioned. First, it may be used as a local application to the skin; or, secondly, it may be administered hypodermically. Guaiacol when painted on the skin appears to be freely absorbed. Applications of 10 to 60 minims may be made at intervals of two or three days, the remedy being used either undiluted or mixed with glycerine, olive oil, or tincture of iodine. The hypodermic method of administration is painful. From 1 to 7 minims are injected deeply into the subcutaneous tissue. Neither of these methods appears to have any special advantages, but they may be useful in exceptional cases when the ordinary mode of administration upsets the stomach.

Creosotal or creosote carbonate and guaiacol carbonate have also been introduced as substitutes for creasote and guaiacol respectively.

Creosotal slowly breaks up in the intestine into creosote, of which it contains 92 per cent., and carbonic acid. It is like creosote, liquid, but has little taste, and, as a rule, causes little or no gastric disturbance. Five-minim doses may be given to begin with, but the dose has sometimes been increased to 30 or 100 minims three times a day. A palatable mode of administration is to drop it into the well-beaten yolk of an egg, this being taken after meals. Its therapeutic effects are the same as those of creosote itself.

Guaiacol carbonate is a tasteless powder, and would probably have met with much more favor than it has done were it less expensive. It may be given in doses of 5 to 15 grains three times a day.

Various other preparations of creosote and guaiacol have from time to time been introduced. One of the latest of these is a combination of iodine and guaiacol introduced by Coronedi (*Atti d. Accad. Med. Fis. Fiorent*, July, 1897), under the name of iodoguaiacol camphorate. P. Bacialli (*Boll. d. Sci. Ned. d. Bologna*, s. vii., vol. ix., March, 1898,) has reported favorably on the effects of this remedy administered hypodermically.

Benzosol, a finely granular, insoluble, tasteless powder, containing 54 per cent. of guaiacol, and splitting up in the intestines into benzoic acid and guaiacol, may be given, in doses varying from 4 to 60 grains, in all conditions where guaiacol is indicated.

Guaiacolate of piperidine, which resolves itself into guaiacol and piperidine in the duodenum, has been tried and recommended as safe, well borne by the stomach, and free from unpleasant effects. As is the case with guaiacol itself, the patients, while under its influence, improve in appetite and general strength. The dose may be gradually increased from 5 grains to start with, three times a day, up to 25 grains. The principal objection to it is its expense.

Intratracheal injections of guaiacol and menthol (1 drachm of a solution consisting of guaiacol 2, menthol 10, olive oil 88), although beneficial in bronchiectasis and fœtid bronchitis, have not proved specially useful in phthisis.

Among constitutional remedies, those known as alteratives hold a high position. Arsenic has been employed in the treatment of tuberculosis from very early times, and few drugs are believed to be more useful at the present day. Given in small doses, 2 to 3 minims of Fowler's solution, after meals, it acts as a tonic, enhances the beneficial action of cod-liver oil, and improves the condition of the blood and general nutrition. In this connection it may be mentioned that the arsenical mineral waters of Mont Dore have long been held in high repute in the treatment of phthisis.

Iron, although largely used, especially when anæmia is a marked symptom, is in our experience not so valuable as arsenic. If there is a tendency to hæmoptysis it appears to increase it, and when there is anæmia depending on tuberculosis, iron does not seem to improve matters. In any case the neutral preparations are better borne than the astringent. Pyrexia is regarded as a contraindication to the use of iron.

Sulphur and its compounds, sulphurous acid and sulphuretted hydrogen, are remedies which have at one time or other been in vogue, and, although little used at the present time, may again enjoy a measure of popularity. Inhalations of sulphurous acid were advocated as recently as 1887 by Dr. Auriol, who published an account of seventy cases so treated by him, and concluded that great benefit had resulted. Similarly, inhalations of sulphuretted hydrogen gas have been employed with some show of benefit. One of the most curious methods of treatment which has ever been devised was that of Dr. Bergeon (1886), of injecting into the rectum a mixture of carbonic acid gas and sulphuretted hydrogen. It had been shown by Claude Bernard that sulphuretted hydrogen introduced into the rectum is rapidly eliminated by the lungs, and Dr. Bergeon dreamed that in this way he would be able to attack the tubercle bacillus *in situ*. The method had an extensive trial, and many reported favorably as to its effects; but experience failed to prove that any lasting benefit resulted, and it has fallen entirely into disuse.

Mineral waters containing sulphur, like those containing arsenic, have been highly recommended in the treatment of tuberculosis; but although the waters of Les Eaux Bonnes are in high repute in France for this purpose, the waters of Harrogate and Strathpeffer are not much resorted to by tuberculosis patients in this country.

Hypophosphites of lime, soda, etc., are often given, but there is little evidence that they have any special action. A largely used proprietary preparation which contains small doses of the hypophosphites probably owes most of its popularity to its palatability and the persistent advertising which keeps its name constantly before the public and the medical profession.

Quinine and strychnine or *nux vomica* are useful tonics, and are often given in combination with other remedies, as in the well-known Easton's syrup.

Nuclein and the so-called nucleinic acid prepared from yeast have received a good deal of attention in America. Sixty to eighty minims of a 1 per cent. solution of nucleinic acid are administered

by hypodermic injection daily, and the same preparation has been given by the mouth in larger doses. Vaughan and others who have used it largely have published some very favorable results. A recent method of treatment associated with the name of a French physician, and alleged to be equally efficacious in cancer and in tubercle, appears to be nothing more or less than treatment with nuclein.

It is impossible to refer to all the drugs which have been used in the treatment of phthisis. Oil of cloves, oil of cinnamon, oil of peppermint, ichthyol, garlic, and cinnamic acid are a few of those which have recently enjoyed a measure of support. The oils of cloves, cinnamon, and peppermint may be given in the form of capsules in doses of 5 to 30 minims, or they may be dropped on the sponge of an oro nasal inhaler and used as inhalations. Ichthyol, a bituminous substance containing a large amount of sulphur, on which its efficacy probably depends, is given in doses of 20 to 60 grains a day, preferably in the form of keratin-coated pills, the outer covering of which will not dissolve until the intestine is reached. Garlic may be given in the form of powder, in capsules, in doses of 3 to 10 grains, or in the form of the syrupus allii (U.S.P.), in doses of 1 to 4 drachms.

Cinnamic acid has been recommended by Heusser as innocuous, and, although not a specific, as capable of curing a considerable number of cases of pulmonary tuberculosis. It is employed in the form of a 5 per cent. emulsion, of which 1½ minims or more are given by subcutaneous injection in the gluteal region, the maximum dose being 15 minims.

We may conclude with a few remarks on the medicinal treatment of various complications of pulmonary or other forms of tuberculosis.

(1) *Fever.* Extended investigations have been made as to the effect of all the well-known antipyretic drugs in reducing fever in tuberculosis. Neither antipyrin, phenacetin, acetanilide, quinine, nor other similar drug, appears to have any permanently beneficial effect on the course of the temperature, while with general treatment a subsidence of fever will often follow.

(2) Fever is often accompanied by a troublesome symptom—namely, *sweating at night.* In such cases the temperature and ventilation of the bedroom and the amount of the bedclothes must be regulated. When profuse perspirations occur, changing the night-dress, rubbing the patient down with a dry towel, and the administration of some food and stimulant, are useful measures to employ.

There are various remedies which are more or less successful in

checking night sweats. Oxide of zinc in doses of 5 grains in pill form, half a grain of the extract or 15 minims of the tincture of belladonna (B.P. 1885), $\frac{1}{100}$ gr. of atropine, half a grain of extract of nux vomica, $\frac{1}{20}$ gr. of strychnine, $\frac{1}{12}$ gr. of agaricin, $\frac{1}{60}$ gr. of picrotoxin, and 20 grains of camphoric acid, are among the remedies that have been found useful. They may be given either singly or in combination. I generally commence with oxide of zinc, which, on the whole, I have found the most satisfactory.

(3) *Hæmoptysis.* It must be borne in mind that in most cases hæmoptysis tends to subside of its own accord, and that quiet and rest are what, as a rule, the patient most requires. A hypodermic injection of morphia (gr. $\frac{1}{4}$) will generally fulfil all the indications. The diet should be plain and no stimulants should be allowed.

Hæmostatics such as hamamelis and ergot are sometimes employed. It is difficult to explain how they act, and it is likely that the esteem in which they are held is due to the natural cessation of the hæmorrhage already referred to. Tincture of hamamelis is used in doses of 20 or 60 minims, and ergot is best given in the form of hypodermic injection (1 or 2 grains of ergotin in solution).

When the bleeding is profuse and continued, sometime depressants such as antimony may be cautiously given, a dose of $\frac{1}{60}$ gr. being repeated every half-hour until some effect is produced.

(4) *Cough.* Space will permit only a very brief reference to the treatment of this frequent and troublesome complication of pulmonary tuberculosis. Our endeavor to treat the cough must be guided by a knowledge of the condition on which the cough depends. If there is active secretion from the bronchi or from the wall of cavities, or if breaking down of lung tissue is going on, expectoration is a necessity. In such cases opiates should be avoided, and in all cases they should be given with great care. Cough mixtures and linctus are generally apt to spoil the appetite, and remedies should be as simple as possible. Lozenges of gum acacia and liquorice are much used at the Brompton Hospital. Certain dry inhalations given on inhalation respirators are very useful where the cough depends on an irritable condition of the mucous membrane. Twenty drops of a saturated alcoholic solution of menthol, or a similar quantity of a mixture consisting of equal parts of creosote or guaiacol and spirit of chloroform, are examples of dry inhalations which have been found useful. Menthol is often used in the form of a lozenge or pastille. When there is laryngeal catarrh the use of a steam inhaler containing a drachm of compound tincture of benzoin to a pint of water at 140° F. sometimes affords relief. When there is excessive secretion, belladonna or codeine may be cautiously used.—*The Practitioner* (*Special Tuberculosis number, June, 1898.*)

Clinical Notes.

A CASE OF EXTRA UTERINE PREGNANCY.

Reported

By Dr. Ferguson.

At the May meeting of the London Medical Association.

HISTORY.—(1) Menstruation. Patient thirty-six years of age; one child, fourteen years old. Case came under his care in April 1896; had not menstruated for one year previous. Complained of pelvic pains in inguinal regions, tenesmus and chronic diarrhœa. Examined under an anæsthetic with negative results. Curetted, and then menstruated the two following months (June and July, 1896). Curetted again in September, 1897, and menstruation followed in October, but no recurrence of menses afterwards. A discharge, sometimes leucorrhœal in character and latterly sanious, was present for the last three or four months. (2) Abdominal distension and slight elevation of temperature, continuously present, in varying degrees, for past two years. (3) Peritonitis. The patient, on the 24th February last, was suddenly seized with an acute attack of abdominal pain, attended by shock, rise of temperature and tympanitis. She rallied, and the symptoms gradually moderated, but did not entirely subside.

Operation. She was admitted to the hospital April 6th, 1898, and was operated upon April 8th. The operation was performed by Dr. Eccles, assisted by Dr. Ferguson and Drs. H. J. and W. Stevenson. (1) Fœtus. Median abdominal incision disclosed pelvic viscera and lower bowels adherent. On exploration, fœtus was found deposited in *right* iliac fossa, behind the caecum and small intestines, and bound down by firm adhesions. In size and development it had the appearance of a five months' fœtus. Only the end of the elbow was visible on opening the abdomen. There was no fluid and no clots in the abdominal cavity. The amniotic membrane covered the upper portion of the fœtus. (2) Placenta.

The placenta was situated on the *left* side, at the fimbriated extremity of the left fallopian tube, and apparently grasped by or implanted on the fimbriæ, and was adherent to the posterior layer of the broad ligament. It was of the shape of the closed hand, but larger, and the rent through which the fœtus escaped scarcely admitted the point of the index finger. Very free hemorrhage, bright in color, from the placenta on separating it from adhesions. The ovarian artery bled profusely, and was separately ligated. The tube, ovary, and placenta were removed by tying off on the uterine side of the placenta about one half-inch from the uterus. (3) Right fallopian tube. This tube was enormously thickened, red, and slightly œdematous, but there was no evidence of pregnancy having taken place in it. (4) The umbilical cord. The cord was broken one-third way from the placenta and well-preserved throughout. (5) Drainage. The pelvic cavity was drained through the abdominal wound with gauze drainage.

Progress of the case. At the date of the report, April 9, one month after the operation, the patient was sitting up, the abdominal wound closed, and the pulse and temperature normal for the preceding week. Recovery uneventful.

Remarks: (1) What was the probable duration of pregnancy? If only five or six months (from October, 1897), what was the cause of the elevation of temperature and abdominal distension for preceding year and a half? (2) When did rupture occur? Would the inflammatory deposits and dense adhesions present have formed in six weeks (since February 24th), and would there not be some evidence of hæmorrhage having taken place on the supposed recent date of rupture? (3) Was there any growth of the fœtus after rupture took place? The rent through which the fœtus escaped, unless much constricted, was too small to admit of the escape of so large a body. (4) Did the placenta continue to grow after the escape of the fœtus? The bright arterial hæmorrhage from the placenta suggests this possibility.

Dr. H. J. Stevenson prepared and exhibited to the association the placenta and fœtus removed at this operation.

Progress of Medicine.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto. Obstetrician to the Toronto General Hospital

AND

H. T. MACHELL, M.D.,

Surgeon St. John's Hospital and Physician to Victoria Hospital for Sick Children.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children and St. John's Hospital.

Oophorectomy for Inoperable Cancer of the Breast.

Prof. Watson Cheyne was induced to operate on two cases lately by the remarkable success which attended Dr. Beaston's case of this kind. In his first case a young woman aged 34 had a history of cancer of the breast for nearly three years. One year after it had been noticed the breast was removed, and one year after this some enlarged glands were removed from the axilla. When seen by Prof. Cheyne the old scars were inflamed and the whole axilla practically filled with cancerous nodules, and, in addition, some were felt in the posterior triangle of the wall. As this was a case in which the attempt to remove the disease was out of the question, he accordingly removed both ovaries. In four months afterwards he noted the disappearance of a great deal of skin infiltration, a distinct subsidence in the axillary mass, and the disappearance of a number of the nodules in the wall. For six months there was a steady and progressive improvement; after that time the case went on from bad to worse, the old scar tissue breaking down again, and the cervical and axillary glands enlarging and producing so much pain as to call for frequent doses of morphia.

In the second case, while the breast and axillary nodules seemed to get slightly smaller and softer, the patient became weaker and weaker, and steadily sank. He concluded that there was not

the slightest benefit from the operation in this case. In the first, however, oophorectomy had, in his words, "undoubtedly a very marked effect on the growth of the cancer, and led to a very distinct breaking down or absorption of portions of the growth. The interesting point, however, is that the effect of the oophorectomy gradually passed off, so that at the end of six months the disease began to grow again, and since then has made rapid strides. The result of these two cases, which were typical cases in young women where the ovaries were still active, and where, therefore, their removal, if of advantage, should have produced the most marked results, is extremely discouraging, and I doubt if it is worth while going on with the procedure."

Audebert (*La Gynécologie*) reports a case of salivation due to retroflexion of the gravid uterus. The uterus was reduced on placing the patient in the genu-pectoral position. She was then two and a-half months' pregnant. Immediately after reposition salivation had diminished and at the end of three days had ceased entirely.

The bicycle must be absolutely forbidden in amenorrhœa associated with phthisis, cancer, diabetes, organic disease of the heart and albuminuria, and organic renal disease; in metrorrhagia or excessive menstruation; in acute metritis, perimetritis, salpingitis, ovaritis, pelvic abscess and paramitritis; in hæmatocele and bleeding fibroids; and lastly in vulvitis and vaginitis.

FANQUEZ.

TUBERCULOUS PERITONITIS: The results of the treatment of this disease by simple incision have been little short of miraculous. In a certain number of recorded operations the peritoneal cavity has been washed out, or drained, or into the inflamed area has been introduced some such medicament as iodoform. Statistics show that the most favorable results on the whole have been attending the mere opening of the abdomen. FREDERICK TREVES.

Dr. Haggard, Nashville (*Am. Jour. Obs.*), in an article on The Necessity for Early Recognition and Treatment of Carcinomata Uteri, asks the profession to note particularly the following, viz.: (1) Education of female patients to the danger of cancer at or about the menopause; (2) early interpretation of suspicious symptoms, followed by immediate local examination; (3) prompt surgical interference in malignant disease. Medical treatment, he says, is neglect! Early surgical procedure, prompt and efficient, is the only rational treatment.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer in Organic Chemistry and Toxicology Woman's Medical College

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When may Women with Heart Disease Marry?

Kisch (*Therapeut. Monats*, February, 1898) discusses this question. He does not agree with Peter's dictum: "*Fille pas de mariage, femme pas de grosse, mère pas d'allaitement.*" Every case, however, must be decided upon its merits. The chief points to be considered are: (1) the kind of heart disease, (2) its duration, (3) the presence or absence of compensation, (4) the general health, (5) the social position of the patient. (*a*) They may marry if the disease is not of long standing, and compensation is good, and the general health not undermined. They will have during pregnancy, and still more during and for a time after delivery, many troubles due to their heart, but in by far the greater number of cases there will be no danger to life. This applies to well compensated mitral regurgitation and stenosis, aortic regurgitation, fairly marked sequelæ of pericarditis, and to muscular degeneration if not too far advanced. The patients must also be in a position to spare themselves bodily exertion as much as possible during pregnancy, to avoid mental excitement, and to have constant medical supervision. (*b*) The prognosis is not so good if the patients are very anæmic or nervous, or advanced in years, or if the valvular disease is congenital or acquired in childhood. In these cases the physician should advise against marriage, or at any rate point out that the disease will almost certainly become worse after marriage. (*c*) Marriage is to be absolutely forbidden as dangerous to life when compensation is failing or when there is advanced muscular degeneration. In all cases where there is dyspnœa, palpitation and a quickened pulse on slight exertion, or marked œdema not disappearing after rest in bed, when there is a tendency to arrhythmia, scanty urine with albumen, and

attacks with irregular small pulse, coldness of the extremities, nausea, dyspnœa, syncope, etc., marriage is dangerous whether the cause of the symptoms be valvular disease, diseased arteries, or cardiac muscles. Even those for whom marriage is allowable must follow certain rules strictly: (1) Coitus must not be frequent, and must be continued to the end of the orgasm, otherwise reflex heart troubles and depression result. (2) They must not have more than one or two children, as the strength of a diseased heart diminishes with every pregnancy in geometrical progression. If this rule is followed induction of premature labor will be luckily seldom necessary, since when it is the results are very unfavorable.—*Brit. Med. Jour.*

MENTHOLATED COLLODION IN THE TREATMENT OF CONTUSIONS.

The following is said to be a useful application for contusions:

Menthol, from 3 to 6 parts.

Collodion, from 24 to 27 parts.

M. Sig. To be painted on once or twice a day. It is said to relieve the pain promptly, and, by the contractile action of the collodion, to hasten the absorption of the effusion, provided it is not a joint that has been bruised.—*The Practitioner.*

IODOFORMOGEN.

Kromayer (*Berl. klin. Woch.*, March 7th, 1898) describes this new preparation, which is a combination of iodoform with albumen. It is a very fine, bright yellow powder, which does not roll into balls. It is practically odorless. It is insoluble in water, and can be sterilized at 100° C. The author has used it in more than a hundred cases, and he gives illustrative details of three of them. It has some of the disadvantages of iodoform, in that it may produce an eczema. Kromayer says that at the present time it is the best dusting powder for wounds, etc., available.—*Brit. Med. Jour.*

TRACTION OF THE TONGUE IN APPARENT DROWNING.

A report was recently published in *La Tribune Médicale*, which appears to illustrate the value of traction of the tongue in the restoration of the apparently drowned. A boy fell into one of the docks at Havre, and was not recovered till he had been immersed fully five minutes. He was quite unconscious when brought to land, but a custom-house officer at once proceeded to perform artificial respiration by Laborde's method (rhythmical traction on the tongue),

while other attendants rubbed him vigorously and blew air into his mouth. In half an hour signs of life reappeared in the form of respiration and a few moans. He was quite two hours longer before completely recovered. Our contemporary considers that the result was mainly due to the tractions on the tongue, and with Dr. Gilchrist, of Nice, who has called our attention to the report, suggests that it should be made widely known throughout the lay press that traction on the tongue, repeated regularly fifteen times a minute, is a highly efficacious treatment in many cases of apparent death from asphyxia.—*Brit. Med. Jour.*

Ten Hygienic Aphorisms.

The late Dr. Frank H. Hamilton, of Bellevue Hospital, is said to have framed the following decalogue of health precepts: (1) The best thing for the inside of a man is the outside of a horse. (2) Blessed is he who invented sleep—but thrice blessed the man who will invent a cure for thinking. (3) Light gives a bronzed or tan color to the skin; but where it uproots the lily it plants the rose. (4) The lives of most men are in their own hands, and, as a rule, the just verdict after death would be—*felo de se.* (5) Health must be earned—it can seldom be bought. (6) A change of air is less valuable than a change of scene. The air is changed every time the wind is changed. (7) Mould and decaying vegetables in the cellar weave shrouds for the upper chambers. (8) Dirt, debauchery, disease, and death are successive links in the same chain. (9) Calisthenics may be very genteel, and romping very ungenteel; but one is the shadow, the other the substance, of healthful exercise. (10) Girls need health as much—nay, more than boys. They can only obtain it as boys do, by running, tumbling—by all sorts of innocent vagrancy. At least once a day girls should have their halters taken off, the bars let down, and be turned loose like young colts.—*Medical News.*

Arsenic should be administered in dry dermatoses only, moist skin-diseases are made worse by it—*Amer. Med. Surg. Bulletin.*

Editorials.

THE ONTARIO MEDICAL LIBRARY ASSOCIATION.

THE first meeting of the directors, appointed at the annual meeting in June last, was held on the 22nd of July, when the following officers were elected for the ensuing year: President, Dr. J. E. Graham; Vice President, Dr. W. J. Greig; Secretary, Dr. H. J. Hamilton; Treasurer, Dr. Herbert A. Bruce; Curator, Dr. N. A. Powell; Assistant Curator, Dr. W. J. Wilson. The establishment of an academy of medicine, as urgently advocated by Dr. Osler at the annual meeting and reported in our last issue, came up for consideration. As the proposal had the unanimous approval of the directors it was thought that the scheme merited a full and free discussion and the serious consideration of the three medical societies which are interested equally with this association. It was therefore hoped that this subject would be brought to the notice of each society as soon as the autumn meetings were well under way.

For the purpose of making the association more useful to its members and to the profession of the province outside of Toronto, it was pretty well decided to have printed a catalogue of the more important and useful works now on the shelves—said catalogue to be distributed among the members.

Heretofore the library has been open only from two o'clock to six each afternoon (Saturdays excepted). The directors, feel that the opening of the library during the morning hours would be of advantage to some of its members. Henceforth we understand the library will be open during the morning as well as the afternoon. This, we are given to believe, depends somewhat upon the support and encouragement given by the Toronto members. We trust that the reading, the progressive, the advanced among our confreres will take steps, if they have not already done so, to identify themselves with an association which was originated by the profession, is maintained by the profession and conducted solely in the interests of the

profession, and, therefore, indirectly for the benefit of the public at large. Of the advantages of joining such an association as this we propose to speak briefly in the next issue.

TUBERCULOSIS.

THOSE who take a deep interest in tuberculosis should read the June number of *The Practitioner* (English), which is devoted entirely to a consideration of that disease. The editor, in the first place, refers to its destructiveness. He says: "No pestilence which visits mankind makes anything like the havoc that is wrought by tuberculosis; typhoid fever, diphtheria, scarlet fever, measles, small pox, cholera, and all other infectious diseases together do not claim half so many victims as are killed by tuberculosis.' He thinks that a vigorous crusade against it ought to be successful; and, in proof of such contention, he refers to the fact that already improved sanitary conditions have greatly diminished its prevalence. He quotes from Ransome to show that the death-rate from phthisis in England and Wales has been greatly diminished during the last fifty years. Better methods of treatment have also had much influence in accomplishing such good results. After referring to the requisites for a sanitarium, he says that "what is needed is an organized movement for the provision of sanitoria for poor tuberculous patients where they can be treated while their disease is yet in a curable stage." He thinks that "the public, if appealed to in the right way, would liberally help," and adds: "But the question is not one of merely philanthropic interest; it is of national importance, as it closely concerns the maintenance of the vigour of the race. On this ground the co-operation of the State might well be asked. Let us, in short, have a national crusade against a national disease."

The following original communications appear in the same issue: "The Treatment of Consumption," by Sir Samuel Wilks; "The Susceptibility to Tuberculosis Under Different Conditions," by Dr. Arthur Ransome; "The Bacteriology of Tuberculosis," by Dr. Sims Woodhead; "The Relation of Tuberculosis of Animals to Man," by Dr. Allan Macfadyen; "The Hospital Treatment of Consumption," by Dr. Pollock; "The Sanatorium Open-Air Treatment in Pulmonary Tuberculosis," by Dr. Hermann Heber; "The Treatment of Pulmonary Tuberculosis by Residence at High Altitudes," by Dr. Theodore Williams; "The Mediterranean Littoral as a Health Resort for Phthisis," by Dr. Michael Foster; "Desert

Climate for Lung Tuberculosis," by Dr. Sandwith; "The Climate of South Africa," by Dr. Hillier; "Ocean Voyages in Phthisis," by Dr. Parkes Weber; "Sanatoria for Consumptive Patients," by Dr. Ruffenacht Walters; "The Open-Air Treatment of Phthisis in Great Britain," by Dr. Burton-Fanning; "The Medicinal Treatment of Phthisis," by Dr. Hector Mackenzie (published in this issue of THE CANADIAN PRACTITIONER); "The Causes of Tuberculosis, and its Prevention by Legislation," by Dr. A. Kerr Chalmers; "The Prevention and Restriction of Tuberculosis in the City of New York," by Dr. Hermann Biggs.

MANSLAUGHTER IN ENGLAND.

THE trial of a physician in England for murder created much interest. A certain Dr. Collins, a professional abortionist, was accused of murder by the Crown officers. Mrs. Uzielli, a lady of fashion and wealth, became pregnant; but, not wanting pregnancy to go on to full term, went to Dr. Collins and asked him to induce an abortion. He treated her twice in his office, and for such treatment received thirty guineas. Abortion resulted, and septicæmia followed, causing death in a few days. A full report of the trial was given in *The British Medical Journal*. *The Journal* said that it was no secret that this scoundrel had for years carried on a large trade as a procurer of abortion.

The evidence for the prosecution showed that in this case death was caused by septic peritonitis; there was a wound of the uterus; the uterus presented signs of recent abortion; Collins, a stranger to the patient, had attended her; the patient, being aware of her pregnancy, wished an abortion; while under the care of Collins she aborted.

Collins said he was treating her for a "weakness" and uterine displacement, and had used a curette to remove a membrane from the womb. His counsel endeavored to show that the fatal peritonitis might have been due to a pre-existing inflammation, and that a sound might have been used to correct a retroversion.

The jury found the prisoner guilty of manslaughter, and handed in the following rider: "The jury wish to express their deep concern at and condemnation of the growing tendency on the part of certain classes of the community, as proved by the evidence in this case, to avail themselves of their marital rights, and try to evade the responsibility of their acts." It is supposed that a verdict of wilful

murder was not returned because there was no evidence to indicate that the abortionist wished to kill his patient. The judge passed a sentence of four years' penal servitude.

PRACTICE BY UNREGISTERED PERSONS IN ENGLAND

WE also learn from *The British Medical Journal* that the Collins case shows some peculiar points of interest both to the profession and the public. Dr. Collins was a disreputable person in many ways. He was convicted of forging a promissory note June 27, 1892. His name was directed by the General Medical Council to be erased from the Medical Register November 23, 1892. In spite of this he resumed practice after such erasure. It appears that as the law stands a man whose name has been erased from the Medical Register may continue to practice, but cannot recover fees by legal action. He is not allowed to dispense his own drugs, but he may prescribe. He may retain his degree of M.D., because the university that conferred it has no statutory right to take it away, even though he be convicted of felony or other infamous conduct. Collins has an M.D. from the Royal University of Ireland, and he can apparently retain it notwithstanding the fact that he is an ordinary scoundrel and criminal undergoing sentence in a prison.

While we have never been able to boast that our Medical Act in Ontario is perfect, still we ought to derive some satisfaction from the fact that it provides machinery by which the Disciplinary Committee of our Medical Council can absolutely prevent any man from practising who is found guilty of disgraceful conduct. If numerous chronic grumblers in this province, who can find no good in our Council, would take the trouble to consider some of the better features of our medical governance, they might profitably take an occasional rest from their continuous labors of fault-finding. We have frequently found, however, that the worst grumblers in our midst are those who know the least about our curricula, our standards, and our legal status.

THE ROYAL ARMY MEDICAL CORPS.

IN another part of this issue we publish the full text of the Royal Warrant forming the Royal Army Medical Corps. To Lord Lansdowne, the present Secretary of State for War, the medical

profession owe a great debt of gratitude. He has shown himself superior to his military advisers. Previous war ministers have attempted to right these grievances but have always yielded to military pressure. Lord Lansdowne has recognized the injustice, and had the ability to carry out the needed reforms. Medical officers will no longer have to endure the snubs of their juniors in rank and at mess, or be called non-combatants and treated as camp followers—a term that one of the commanders-in-chief so inconsiderately applied to them. Rank has been granted, grievances righted, and appointment in the Royal Army Medical Corps will no longer go begging.

SURGEON-MAJOR BERTOL H. SCOTT.

MEDICAL heroes are by no means rare, yet amongst them we are always delighted to find the names of those we know and love. Dr. Bert. Scott, Trinity '83, of the Army Medical Staff, is a hero, and like all medical heroes, the idea of self did not occur to him until those around him had been cared for. Surgeon Capt. Scott had only been on the West Coast of Africa a couple of weeks when he was dispatched as medical officer to the Expeditionary Force under Major Norris and was wounded twice while taking part in the march from Karene to Port Lokko. The wounds were both severe, one fracturing the left femur and the other a chest wound in the region of the heart. He was the only medical officer with the force, and with these severe wounds, dressed only by inexperienced assistants, he nobly attended to the soldiery who had been wounded in the same action. He had to endure this suffering for three days before receiving medical attention. Such actions are those of a true hero. Long may he live to reap the reward of his bravery. His promotion has been gazetted. Surgeon-Major Scott had seen previous active service with the Chitral Relief Expedition.

THE MEDICAL DEPARTMENT.

THE Government has evidently recognized the fact that there should be some organized Medical Department, because they have appointed a Medical Director. We now want to see some movement made whereby a corps could be placed in the field equipped and ready for service. There is absolutely nothing in the way of medical and surgical equipment in stores.

The ambulance corps that are connected with the different regiments are clothed, paid and equipped from the regimental funds —the Government in no way recognizing them. This should be changed, and this heavy charge removed from the regimental funds. Keep in each corps a well-equipped and drilled ambulance corps, paid as other men of the regiment are, and brigade the city ambulance corps for drill purposes.

Meetings of Medical Societies.

TORONTO PATHOLOGICAL SOCIETY.

THE last regular meeting of the year was held in the Biological Department of Toronto University on May 28th.

Dr. H. B. Anderson, president, in the chair. The meeting was called to order at 9 p.m.

Present—Drs. Primrose, Wilson, Anderson, Wm. Oldright, J. J. Mackenzie, Bruce, Carveth, Fotheringham, Nevitt, Silverthorne, Reeve, McPhedran, Rudolf, Cameron, H. H. Oldright, Parsons.

Visitors—Drs. Large, Mullin, and Gowan Ferguson, of Grand Falls, Montana.

The minutes of the previous meeting were taken as read and adopted.

Dr. H. A. Bruce showed seventy-eight gall-stones, removed from a woman thirty-five years of age who was taken with a severe attack of biliary colic four days before. On opening the peritoneum a small quantity of serous fluid escaped and a mass of lymph presented. On removing this the gall-bladder was exposed and a small perforation found, projecting through which was a small stone.

The omentum was rolled up into a mass and adherent by lymph to the gall-bladder. The general peritoneal cavity was shut off by plastic peritonitis. The opening in the gall-bladder was enlarged and the stones removed. Five of them are of unusually large size.

The large, conical-shaped one was lying in the cystic duct completely plugging it. There was no bile in the gall-bladder. Its wall was greatly thickened and soft, except surrounding the point of perforation where it was thinned.

The patient had had two previous attacks of biliary colic—the first one two years ago. An interesting feature in the case is the fact that the patient had typhoid fever some six months previous to the first attack. She has never been jaundiced.

During the first twenty-four hours after the operation eight ounces of bile drained away from the gall-bladder.

Dr. Fotheringham, discussing Dr. Bruce's paper, asked whether any new theory could be formulated as to the continuous formation of gall-stones independently of the entrance of bile into the viscus. It might be possible that here, though bile could not enter the bladder on account of the conical calculus which plugged the cystic duct, the cramming full of the bladder by stones was progressive.

Dr. Carveth, discussing Dr. Bruce's paper, stated that he had heard the discussion last September in the British Medical Association on the subject of the relationship of typhoid fever and gall-stones, and asked Dr. Bruce what his experience had been in the matter.

Dr. Mackenzie called attention to the interesting fact of the history of typhoid preceding the appearance of the gall-stones.

Dr. Bruce, replying, said that he had met with two other cases in which gall-stones had followed typhoid fever. A great deal has been written about the subject recently, and many observations have been made which tend to show that typhoid fever is frequently followed by an attack of cholelithiasis and the formation of gall-stones.

CALCULI IN THE OS PENIS OF A DOG.

By Dr. Primrose.

The dog was sent to a veterinary surgeon (Dr. F. A. Campbell, V.S.) for the purpose of being treated for a lacerated paw which had been torn by a trolley car, and for which the foot was amputated. While under treatment for the injury he showed no symptoms that would indicate the presence of calculi in the bladder. He voided his urine without any difficulty until a few days after he was sent home, cured as far as the leg was concerned. The veterinary surgeon was then sent for again because the animal was straining very hard in his attempts to pass urine; the attempts were wholly ineffectual. A number two catheter was passed into the urethra, but an obstruction was encountered which was diagnosed as a calculus in the os penis. Urethrotomy was performed, but it was found impossible to remove the calculi which were present, they were wedged in so tightly in the urethral groove of the os penis. The dog was destroyed, and the specimen obtained which is now presented to the society. The bladder was found to contain about twelve stones of different sizes and six in the urethra. The specimen presented is the os penis of a dog; the bone is 8 c.m. long, and in the proximal part of it in the urethral groove are three calculi, each of them being 4 mm. in diameter. They are firmly wedged in the groove, and cannot be removed without crushing them. The

shape of the urethral groove being greater than half a circle on section, and not of uniform diameter throughout, permits of such calculi being embedded firmly without the possibility of their being dislodged.

Dr. Oldright, discussing Dr. Primrose's paper, narrated the occurrence of a calculus about 1½ inches long and ¼ inch in diameter which he had removed (by incision) from the urethra of a man. It had been gradually forming during three years. The specimen is now in the museum of the University of Toronto.

Dr. Nevitt also discussed the case.

Pulmonary Emphysema, by Dr. Silverthorne. This specimen is a right lung from a case of tuberculosis of several years' standing; age about forty years; female. She had occasional hæmorrhages, and death was due to a copious hæmorrhage from a cavity in the left lung. The specimen is interesting only as an example of vesicular emphysema of a lung otherwise slightly affected. There are three or four indurations of the right lung shown on the surface as depressions.

FUSIFORM ANEURISM OF AORTA.

By J. T. Fotheringham.

The specimen is a beautiful example of the reparative effects of nature, combining in an unusual degree elasticity and thickening, showing very little of the hardening and calcification so commonly seen, and presenting uniformity of progress and dilatation without sacculation in a way not often seen. The intra-pericardial portion is very elastic, though so much dilated, and the clinical evidence made me diagnose the case one of aneurism of the first portion of the thoracic aorta with sacculation towards the right, which, so far as it went, was quite correct. The patient D.M., aet. 52, was a man of excellent habits in every way, in charge of the stock room in a large departmental store, and without any history of syphilis or alcoholism. In December last he consulted me about a truss which was hurting him, and in looking him over I found that the subjective complaint as to the truss was the least thing wrong. He had also first a huge varix of the right internal saphenous vein, dilated but with little thickening about it; second, a peculiarly neurotic and emotional disposition to cry for no cause merely while calmly detailing his case to me, and an unusual neurotic difficulty of urination at night and no diurnal abnormality. But the third discovery which I made was the most important one, this aneurism, of which he made no complaint except that his voice was changing and that at

times phonation was very difficult. It is surprising to find practically no subjective difficulty referable to the circulatory system, a fact which enhances still further the admiration already expressed for nature's reparative efforts. His pulse averaged eighty—there was no œdema of the ankles or shortness of breath, or other evidence of circulatory insufficiency. He used only one pillow, and did his work as usual up to thirty hours before his death. Death was due to cerebral embolism. He had last August a small embolism from which he speedily recovered except for a slight dragging of the right leg. Symptoms of a second embolism developed gradually one night this month and became noticeable to his wife about 2 a.m. He grew gradually more comatose, complete right hemiphlegia came on and at 6 p.m. the following day he died, with widely dilated pupils, of respiratory failure and Cheyne-Stokes breathing in which the suspension of breathing lasted sometimes fully thirty seconds. I regret very much that a post-mortem examination of the brain was not made; the thorax and abdomen only were opened.

Dr. Fotheringham referred to lack of tone in the vascular system, described by Thoma as one of the causes of aneurism.

Dr. A. McPhedran, discussing Dr. J. F. Fotheringham's paper, said he thought the old theory that degeneration of the wall of the artery always precedes aneurism of any vessel was the true one. Loss of vascular tone can scarcely be accepted as a sufficient cause.

Dr. Primrose asked if there was any theory advanced to account for what is an apparently normal dilatation of the aorta. This dilatation is described by anatomists as the "great aortic sinus," and appears to be due to the force of the contraction of the left ventricle impinging directly upon the vessel wall at this point. If this were the proper explanation, however, one would not expect the dilatation to remain within definite bounds as it appears to do.

Dr. Rudolf said this dilatation referred to by Dr. Primrose was not present in childhood, but appeared to commence about the twentieth year and increased to the fortieth year, when it ceased. He referred to some literature on the subject, and thought Dr. Primrose's explanation of the condition correct.

Dr. Large reports a case of extra-capsular fracture of the femur, with specimen, *under care of* Dr. Nevett. *Age* 84. *Admitted* to Toronto General Hospital, March 19th, 1898. *Died* May 15th, 1898. *Disease*—Fracture of femur and ulna. *History*—While coming down Yonge street March 19th, 1898, he was run

into by a bicyclist, struck in the right hip and thrown to the ground. He was carried into a house and afterwards brought into hospital. On examination there was marked eversion and rolling outward of right leg, loss of movement, and 1½ shortening. Crepitus was elicited, and from the position of the fragments an extra-capsular fracture of the femur was diagnosed. A long splint was placed on limb and the shortening and deformity partly overcome. Next day, at the request of the attending surgeon, extension was placed upon limb and six-pound weight attached. Patient had good appetite, and, as he had been in the habit of lying in bed most of the time before the injury, only going out when he had to, to solicit financial aid, he progressed favorably till about May 12th. By this time the extension had been removed, and there was some return of movement to the leg. An endeavor was made to get him out of bed, but he became quite faint and had to be put back. Now, for the first time, he suffered from passive congestion, although he had a slight cough previously. His condition became gradually worse, and he died May 15th, 1898.

P.M. Senile decay well marked. No excessive fluid in pleural cavities, calcification in mitral and aortic valves. Lungs: Some slight adhesions (not recent) at apex and ant. margins. Both lungs emphysematous anteriorly, and hypostatic œdema very marked in dependent portions.

Left kidney: Cortex atrophied, fœtal lobulation, small cysts on surface, weight four ounces.

Right kidney: Lobulated, increased pelvic fat. Stellate veins prominent, pale in color. Smooth on surface, weight four ounces.

Gall bladder: Distended with bile.

Right femur on removal was found to have an impaction of neck into the greater trochanter and a fracture splitting the greater trochanter above and extending down the posterior inter-trochanteric line to below lesser trochanter, and terminating above and below by running into the line of cleavage caused by the impaction of neck. Fairly firm union has resulted, and the deformity is pretty thoroughly overcome, although the head of bone is nearly at a right angle to the shaft.

Dr. Nevitt complimented Dr. Large on the success of his treatment, saying that the union and position being so good as to make one doubt as to the existence of a fracture. Such a result in a patient eighty-four years of age was unusual.

Dr. Wm. Oldright and Dr. Anderson also discussed the case.

Synostosis of rib—From a case of empyema—exsection of a portion of the rib for drainage. The section had filled up—the new bone lapping over and holding the lower rib in its embrace.

Dr. Wm. Oldright also presented an elbow joint which he had excised. The patient had been referred to him by a senior student, and was seen by him after she had been about four weeks ill with what had at first been supposed to be rheumatism. There was much pain in the joint (which was instinctively kept as immobile as possible), and great œdema of the arm and forearm. There had been high temperature, rapid feeble pulse, great pallor and emaciation. Seen a week later, there was crepitus on lateral motion. Operative interference was decided upon, and on cutting into the joint a small quantity of thick pus exuded and the surface of the joint found to be so disintegrated that excision had to be resorted to; about 1½ inches of the humerus and the surfaces of radius and ulna which articulated with the humerus, were removed; these being the respective portions found diseased. The point of pathological interest is absence of satisfactory cause for the condition of the joint. There was no history of injury to the joint, nor of infection in any other region; no previous wound; she was questioned as to gonorrhœal infection, but this was denied.

The other specimens—hæmatoma, appendix and pus tubes—were reserved owing to the length of the programme.

A paper on tuberculosis of suprarenal capsules without pigmentation of the skin was read by Dr. Anderson.

To be published later.

Dr. Cameron, discussing Dr. Anderson's paper, asked as to what part of the glands was affected. The cortical and medullary portions appeared to have different functions, acting as two separate organs.

Dr. Rudolf asked if the semilunar ganglia were involved.

Dr. Anderson replied that the whole organ seemed to be equally involved. There was no adhesion of the capsules to the surrounding structures, so he took it that the ganglia were not involved.

The business of the society was then proceeded with. Mr. J. J. Mackenzie, the treasurer, read his report which showed a good cash balance for the year. The elections for the coming year resulted as follows: President, Dr. Primrose; vice-president, Mr. J. J. Mackenzie; Council, Dr. Parsons, Dr. Anderson, Dr. Fotheringham.

Dr. Anderson on vacating the chair thanked the society for their co-operation during the year.

Dr. Primrose then took the chair and expressed his appreciation of the honor the society had done him in electing him president.

Dr. Reeve, after some very complimentary remarks regarding the work of the retiring president, moved a vote of thanks to Dr. Anderson. This was seconded by Mr. Cameron. Carried unanimously. The motion of thanks was presented. Dr. Anderson replied.

Moved by Dr. McPhedran, seconded by Dr. Wm. Oldright, that a vote of thanks be extended to the recording secretary. Carried. Dr. Parsons replied.

The meeting then adjourned.

H. C. PARSONS,
Rec.-Sec'y.

Correspondence.

ARE BACTERIA TRUE SAPROPHYTES AND POST HOC?

To the Editor CANADIAN PRACTITIONER.

SIR,—Several years ago being convinced that in pathology bacteria are post hoc and auto-intoxication the primary factor in the lesions produced, I ventured to predict the "passing" of Koch's bacillus as *the* cause of tuberculosis. Already we have had strong doubts, thrown out by former believers, as to whether this organism is entitled to the important position it has from the first held, as a causative factor. True, some high authorities never did believe in Koch's theory. Even Zeimssen had doubts—saw great obstacles in it.

Now, we are told that the brilliant work of Sydney Martin "leads us to believe that the poison of diphtheria is a product of our own body" (*Brit. Med. Jour.*, July 16), but "under the stimulus" of the bacillus.

This may be a kindly way of letting the microbes "down easy." It is possible that purely chemical and physiological processes are alone capable of generating the poison, which we are told is "otherwise analogous to that form which follows the ingestion of dead matter."

Man is characteristically prone to blame "some other fellow," rather than his own false habits of life, for his physical defects.

All recorded evidence, and much unrecorded, indicate that bacteria have a saprophytic origin, and are rendered pathogenic by their environment. What causes the B. coli com. to become so virulent as it sometimes is?

Is it not entirely in accordance with nature that these organisms —"disease germs" so called—come in, benignly, to "clean up"—split up the self-generated poisons in the body, and make for restoration of physiological equilibrium?

What evidence have we that diphtheria would not be a worse disease, more fatal, were it not for the bacilli? Or that even the

false membrane is not a curative product, possibly sometimes from an excessive curative process?

How do we know that incipient phthisis, evidently an auto-intoxication, probably from want of oxygen, would not eventually make more rapid progress without the tubercle bacillus? Or that the formation of tubercular masses is not a curative process? Bovines may continue in apparent good health and condition while yet harboring in various tissues of the body large masses of tubercular matter. And Dr. Brush, who has had much experience amongst these animals, declares they may be tuberculous from birth to old age.

It may be asked, how about the communicability or infectiousness of so-called germ diseases? May not the microbes be but carriers of an auto-intoxicant—retaining it even after repeated cultures in the laboratory? It appears that the washings or an infusion of yeast cells will cause fermentation without the cells.

Does not the apparent success of the serum treatment of these diseases favor the view above indicated?

This may be looked upon as too speculative. But without some degree of speculation—theorizing—there would be but little progress.

Yours, etc.,

EDWARD PLAYTER.

Toronto, August, 1898.

Book Reviews.

DaCosta's Surgery: Second edition, revised and greatly enlarged. Modern Surgery, General and Operative. By John Chalmers DaCosta, M.D., Clinical Professor of Surgery, Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital, etc. Handsome octavo volume of 900 pages, profusely illustrated: Cloth, $4 net; half Morocco, $5 net. Philadelphia: W. B. Saunders; Canadian agents, J. A. Carveth & Co., 413 Parliament street, Toronto.

The second edition of this work is at hand. Small works on surgery seem to fill a want more or less apparent, but they also tend to induce lack of thoroughness, which should not be encouraged. We are not in accord with these abbreviated works, although we can candidly say that this is one of the best of the small works on surgery.

Van Valzah and Nisbet's Diseases of the Stomach. By William W. Van Valzah, M.D., Professor of General Medicine and Diseases of the Digestive System and the Blood, New York Polyclinic; and J. Douglas Nisbet, M.D., Adjunct Professor of General Medicine and Diseases of the Digestive System and the Blood, New York Polyclinic. Octavo volume of 674 pages, illustrated. Cloth, $3.50 net. Philadelphia.

This work is an embodiment of good sound common sense. Too many works are simply compilation, the errors included, and frequently without credit. This work has much that is original, it is concise but not too restricted, never too wordy. Its authors have tried to explain the changes in the stomach from a physiological and pathological standpoint. Theory without practice is largely omitted from its pages.

They have embraced in chapters diseases of common origin "Dilatation of the stomach," like "heart failure," is placed on a scientific basis and relegated to oblivion. The conditions, however, are fully described under their proper heading.

The section on diagnosis and diagnostic methods is comprehensive yet concise. Considerable importance is placed on the clinical history, and a very exhaustive chapter is written, with many practical details, to enable one to understand the significance of signs and symptoms. All through the book is to be found advice and descriptions that place the work amongst those essential to the busy practitioner. It is well printed and bound.

PRIMER OF PSYCHOLOGY AND MENTAL DISEASE: By C. B. Burr, M.D., Medical Director of Oak Grove Hospital for Mental Diseases, Flint, Michigan, &c. Second edition. Philadelphia: F. A. Davis & Co., 1898.

This little book will no doubt be welcomed by many who have often felt the need for just such a concise practical work, affording as it does, an introduction to the first principles of psychological study, and tempting the reader to further investigation in a line of study peculiarly attractive. The author evidently appreciates the necessity of a general understanding of the principles of normal psychology by all who are interested in the study and treatment of mental diseases. Although the work is intended for use in training schools for attendants and nurses, and in medical classes, no general practitioner will fail to find in the pages of the book lessons worthy of much more than a passing notice. The study of psychology has in recent years become a most inviting field to the medical reader, and Dr. Burr has done much in his excellent *multum in parvo* to popularize a subject of which he is justly entitled to speak with authority. The fact that a second edition was so soon imperatively demanded is the best commendation the author could desire. We can readily understand the reception which has been accorded this interesting primer, and its quick adoption as a text-book in training schools for nurses in connection with hospitals for the insane. More than one leading medical college in the United States, where Dr. Burr enjoys a wide reputation as a distinguished alienist, has placed the work on its list of principal text-books, and we fancy none will regret the trifling investment necessary to possess a copy.

ATLAS OF INTERNAL MEDICINE AND CLINICAL DIAGNOSIS. By Dr. Chr. Jakob, of Erlangen. Edited by Augustus A. Eshner, M. D., Professor of Clinical Medicine in the Philadelphia Polyclinic; Attending Physician to the Philadelphia Hospital. 68 colored plates. Cloth, $3.00 net.

ATLAS OF LEGAL MEDICINE. By Dr. E. von Hofmann, of Vienna. Edited by Frederick Pearson, M.D. Clinical Professor of Mental Diseases, Wowan's Medical College, New York; Chief of Clinic Nervous Dept., College of Physicians and Surgeons, New York. With 120 colored figures on 56 plates, and 193 half-tone illustrations. Cloth, $3.50 net.

ATLAS OF DISEASE OF THE LARYNX. By Dr. L. Grunwald, of Munich. Edited by Charles P. Grayson, M.D., Lecturer on Laryngology and Rhinology in the University of Pennsylvania; Physician-in-charge, Throat and Nose Department, Hospital of the University of Penn. With 107 colored figures on 44 plates, and 25 text illustrations. Cloth, $2 50 net.

ATLAS OF OPERATIVE SURGERY. By Dr. O Zuckerkandl, of Vienna. Edited by J. Chalmers DaCosta, M D., Clinical Professor of Surgery, Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital. With 24 colored plates and 217 illustrations in the text. Cloth, $3.00 net.

ATLAS OF SYPHILIS AND THE VENEREAL DISEASES. By Prof. Dr. Franz Mracek, of Vienna. Edited by L. Bolton Bangs, M.D., late Professor of Genito-Urinary and Venereal Diseases, New York, Post-Graduate Medical School and Hospital. With 71 colored plates from original water colors by A. Schmitson. Cloth, $3.50 net.

SAUNDERS' MEDICAL HAND ATLASES.

The appearance of these works marks a new era in illustrated English medical works. For many years the Germans have monopolized all illustrations that were of practical value—colored to nature and true in detail. Colored illustrations are usually an eyesore. In these atlases they are works of art. We are enabled now to enjoy these same German illustrations through the generosity and business enthusiasm of that very progressive medical publisher, Mr. W. B. Saunders, of Philadelphia. This series of atlases is a translation of the famous "Lehmann Medicinische Hand Atlanten," and the volume contains from 50 to 100 colored plates, which are themselves typical clinical studies, and serve the purpose of clinical work where one is situated away from the hospital centres. The plates are accompanied by complete descriptions, and other points are illustrated by diagrams, photogravure and line cuts. The advantage of the clinical matter in these volumes is that the cases are described by noted authorities, and are not selected from those rarer forms of disease, but are of cases one is likely to meet in daily practice. The publisher should be encouraged by a large sale of these valuable atlases. The price is exceedingly moderate considering the excellence of the lithographic illustrations. We will refer to some of them more in detail in next issue. In the meantime, however, judging from the one at hand, we are more than delighted with the quality of the work.

DIABETES MELLITUS AND ITS TREATMENT: By R. T. Williamson, M.D. (Lond.), M.R.C.P., Medical Registrar, Manchester Royal Infirmary; Hon. Med. Officer, Pendleton Dispensary (Salford Royal Hospital); assistant to the Professor of Medicine, Owens College, Manchester. With eighteen illustrations (two colored). Edinburgh and London: Young J. Pentland, 1898.

A work of over four hundred pages dealing exclusively with diabetes and its treatment, from the pen of an able and painstaking author, is a valuable possession for a physician who has one or more diabetics under his care. The book is splendidly printed on heavy paper, and the author's style is clear and direct.

The first fifty pages are devoted mainly to sugar tests of which a large number are discussed; the author has found Fehling's solution, the phenylhydrazin test, and fermentation, by far the most satisfactory, and their combination leaves nothing to be desired. If a negative result is obtained with Fehling's test the urine may be declared free from sugar in the clinical sense; but if only a faint reaction is obtained the phenylhydrazin and fermentation tests should be applied.

The vexed question of the glycogenic functions of the liver is next discussed. The rival theories of Claude Bernard and Pavy are contrasted and the arguments in favor of each stated briefly. After dealing with experimental diabetes and phloridzin diabetes, a very interesting chapter is devoted to experimental pancreatic diabetes.

Alimentary glycosuria, puerperal glycosuria, and the glycosuria produced by poisons and chemical substances are then described. Sugar is said to be present in the urine of women during lactation at some period in every case, and when the breasts have been engorged from any cause it is very commonly present though in small amount.

Among the diseased conditions in which glycosuria is sometimes present are brain lesions, injury to the head, mental diseases, after various febrile affections, *e.g.*, typhoid, scarlet fever, malaria, diphtheria and appendicitis. A slight glycosuria is not uncommon in the ailments of stout and wealthy elderly persons, but it is rare among the poor and badly nourished.

Next comes a long chapter on the etiology. The possibility of infection is discussed but deemed improbable. Diabetes frequently occurs in the obese, but it is usually of a mild form, and the prognosis, with suitable dieting, is favorable. Great beer drinkers are often affected; spirit drinkers less frequently. The development of diabetic symptoms directly after the drinking of cold fluids whilst perspiring is noted. He does not think that excess of carbo-hydrate food or a special form of diet will cause diabetes.

There is, he says, no clear evidence from pathological anatomy alone that diabetes is related to hepatic changes. The curious fact that diabetes sometimes occurs quite suddenly, so that the patient can tell the exact hour at which the symptoms commence (*e.g.*, after fright or mental anxiety) is suggestive of a lesion of the nervous system in some cases. Emotional disturbances apparently played some part, as exciting causes in sixteen per cent. of the cases at the Manchester Royal Infirmary. He considers it quite possible that some slight functional change in the nerve cells of the nuclei of the medulla oblongata may be the cause, or may play some important part in the causation of certain cases of diabetes.

The relation of diabetes to lesions of the pancreas, which has excited so much attention of late years, is next taken up. The frequent connection of the two makes it almost certain that, in some cases, diabetes is directly due to pancreatic disease. Even in cases where there are no lesions of the organ, it is easy to conceive of nervous influences so altering the internal secretion as to produce glycosuria.

The author concludes that diabetes is produced in various ways, just as fever is; that, in fact, glycosuria and the accompanying symptoms of diabetes mellitus are produced by several pathological conditions.

The chapter on Symptomology is excellent. There is often a characteristic fæces. Marked wasting in a young person, or great obesity

in an old person should always lead to an examination of the urine for sugar. Several cases of sudden onset are mentioned. In any urine which is clear and not high colored, if the sp. gr. is over 1025, there is strong probability that sugar will be present. The morning urine should never be used for testing, as it may be free from sugar in mild cases. Sugar excretion may be diminished or arrested by various intercurrent affections, especially febrile affections.

Pneumaturia is an occasional though very rare result of decomposition of sugar in the bladder: gases are formed in the bladder and sugar may disappear from the urine. The diminution of thirst diuresis and sugar excretion is sometimes of bad omen in the most severe forms of the disease. The appearance of casts in the urine in severe or advanced diabetes is usually a sign of approaching coma.

Too rigid exclusion of carbo-hydrates from the diet may be a cause of acetonuria. Symptoms of approaching coma have sometimes been arrested by the addition of a small quantity of carbo hydrates to the diet.

The curious fact that dyspeptic individuals often lose all their dyspeptic troubles after the onset of diabetes is noted. When phthisis complicates diabetes often the sugar diminishes in quantity or even disappears shortly before death.

The complications and pathological changes in the various organs are discussed fully, especially those of the eye, brain, and spinal cord. He has found total absence of the knee jerks in about fifty per cent. of the cases at the Manchester Royal Infirmary, and regards this symptom of unfavorable prognostic significance.

One of the best chapters is that on diabetic coma. Some albumen and numerous casts are usually found in the urine in this condition, and he thinks it probable that the coma is due to failure of the renal function and consequent retention of some poisonous materials in the blood. The presence of acetone is probably not the cause of the coma, and the exact cause still remains to be determined. Death usually occurs within forty-eight hours after diabetic coma sets in.

In summing up regarding the pathogenesis the author states that the true nature of the disease is still very obscure, and will probably long remain so.

The opinion that diabetes is not a pathological entity but a group of symptoms which may be produced by various morbid changes in the system is commended. "Sometimes the starting point of the disease is in the nervous system, sometimes in the pancreas, occasionally in diseases of the arteries (arterio-sclerosis), possibly in the muscles sometimes, and possibly it is due to various other causes and to endogenous or inherited morbid conditions." The forms of diabetes and the favorable and unfavorable prognostic indications are briefly discussed.

The rest of the work is devoted to the treatment of the disease. The management of the various forms and stages is fully entered into, but space forbids even a synopsis of the author's views in this review.

The work as a whole has impressed us very favorably, and the physician who wishes to be thoroughly conversant with the subject ought to have a copy.

DUDLEY'S GYNÆCOLOGY: A Treatise on the Principles and Practice of Gynæcology. By E. C. Dudley, A.M., M.D., Professor of Gynæcology in the Chicago Medical College, Chicago. In one very handsome octavo volume of 632 pages, with 422 engravings, of which 47 are in colors and two colored plates. Just ready. Cloth $5 net. Leather, $6 net.

ON CARDIAC FAILURE AND ITS TREATMENT: With especial reference to the uses of bath and exercises. By Alexander Morrison, M.D. Edin., F.R.C.P. Ed., Physician to outpatients to the Great Northern Central Hospital and the Paddington Green Children's Hospital, Physician to the Saint Marylebone General Dispensary. 256 pages, illustrated. Price $2.50. London: The Rebman Publishing Co., Ltd., 11 Adam street, Strand, W.C.

DISEASES OF WOMEN: A Text-book for Students and Practitioners. By J. C. Webster, B.A., M.D. (Edin.), F.R.C.P.Ed., Demonstrator of Gynæcology, McGill University; Assistant Gynæcologist, Royal Victoria Hospital; Fellow Royal Society of Edinburgh, etc., etc. Illustrated with 241 figures. Crown 8vo., 650 pp. London and Edinburgh: Young J. Pentland. Montreal: Wm. Drysdale & Co.

CONSERVATIVE GYNÆCOLOGY AND ELECTRO-THERAPEUTICS. A Practical Treatise on the Diseases of Women and Their Treatment by Electricity. Third edition, revised, re-written, and greatly enlarged. By G. Betton Massey, M.D., physician to the Gynecic Department of Howard Hospital, Philadelphia; late Electro-Therapeutist to the Infirmary for Nervous Diseases, Philadelphia; Fellow and ex-President of the American Electro-Therapeutic Association, of the Société d'Electrotherapie, of the American Medical Association, etc. Illustrated with twelve full-page original chromo-lithographic plates in twelve colors, numerous full-page original half-tone plates of photographs taken from nature, and many other engravings in the text. Royal octavo. 400 pages. Extra cloth, beveled edges, $3.50 net. The F. A. Davis Co., Publishers, 1914-16 Cherry street, Philadelphia; 117 W. Forty-second street, New York City; 9 Lakeside Building, 218-220 S. Clark street, Chicago, Ill.

Medical Items.

DR. J. N. E. BROWN left Toronto for the Yukon August 2nd.

DR. R. J. DWYER has gone to Johns Hopkins, Baltimore, for a few weeks.

DR. J. G. M. SLOAN has been made an associate coroner for the County of Bruce.

DR. J. D. WEBSTER, Tor. '98, is located at 193 Massachusetts avenue, Buffalo, N.Y.

DR. B. E. THOMPSON has been appointed an associate coroner for the County of Wentworth.

DR. R. A. LEONARD, of Napanee, has been made an associate coroner of the Counties of Lennox and Addington.

A CONGRESS of the Italian Medical Association of Hydrology and Climatology was held at Parma on April 3rd, 4th and 5th.

DR. W. F. MAYBURRY (Tor. '97), one of the resident staff of the Toronto General Hospital in 1897-98, has been appointed superintendent of the County of Carleton Protestant Hospital, Ottawa.

THE treasurer of St. Thomas' Hospital states that during 1897 the Roentgen rays were used in 416 cases, and that it has been found necessary to appoint an assistant to the officer in charge.

DR. L. S. MCMURTRY, of Louisville, Ky., Dr. E. D. Fisher, of New York, and Dr. Adam H. Wright, are the guests of Dr. J. F. W. Ross, in Muskoka. The party will return about August 25th.

DR. H. S. THOMPSON (Trin. '92), who has been practising for some years in Albion, Michigan, has gone to Cuba to act as regimental surgeon, with the rank of major, in the Thirty-third Michigan Volunteers.

ERRATA.—In the section on Laryngology and Rhinology in the July number of this journal, correct as follows: For Lemon, wherever found, Semon. For Sir Felix Lemon, wherever found, Sir Felix Semon. On page 420, for Trudenthal, read Frudenthal; and for Heeyngs read Heryng.

DR. MITCHELL BRUCE has undertaken to write a short biography of the late Sir Richard Quain for early publication. The Queen has sent a letter of condolence to the relatives of Sir Richard Quain, who was one of the Physicians-Extraordinary to Her Majesty.

THE MODERN CITATION.—"Here," roared the old judge to his son, studying law with him, "you told me you had read this work on evidence, and the leaves are not cut." "Used X-rays," yawned the versatile son; and the judge chuckled with delight as he thought what a lawyer the boy would make.—*Richmond Despatch.*

THE MEDICAL LOG OF THE "MAINE."—Among the things recovered by the divers from the ill-fated *Maine*, now lying at the bottom of the harbor of Havana, was the journal of the medical officers. Surgeon Heneberger, the medical officer of the ship, had brought the record up to the last moment before the catastrophe, the last entry being dated February 15th.

A ROMAN DOCTOR.—In *The Spectator* of August 28th, 1897, A.C. has the following "after Ausonius":

Wise Arruns asked, "How long will Caius live?"
Replied, "Three days the fatal sisters give":
And Arruns knew the prophet's art. But lo!
Stronger than gods above or gods below,
Euschemon comes; his healing arts he tries,
And in a single day poor Caius dies.

—*The Bristol Medico-Chirurgical Journal.*

CONGRESS FOR THE STUDY OF HUMAN AND ANIMAL TUBERCULOSIS.—The Congress for the Study of Human and Animal Tuberculosis held its fourth meeting in Paris from July 27th to August 2nd, 1898. The questions proposed for discussion were: (1) Sanatoria as a means of prophylaxis and treatment of tuberculosis; (2) Serums and antitoxins in the treatment of tuberculosis; (3) The X-rays (Radioscopy and Radiography) in the diagnosis of tubercle; (4) The X-rays in the treatment of tuberculosis; (5) The struggle against animal tuberculosis by prophylaxis; (6) The struggle against human tuberculosis by disinfection of places inhabited by tuberculous patients; (7) The diffusion of tuberculosis in the army and its prophylaxis.

FIRM RESOLUTION.—"Dave" Saddler was a brave Confederate soldier who was in the hospital at Richmond, and who, in spite of his sufferings, always took a cheerful view of the situation. One day, when he was recovering, a visiting minister approached his cot and tendered him a pair of home-made socks.

"Accept these," said he. "I only wish the dear woman who knit them could present them to you in person."

"Thank you, very much," said David, gravely, "but I have decided that I never shall wear another pair of socks while I live."

The preacher protested, but to no purpose; and finally he sought out the boy's sister to tell her how foolishly the invalid had behaved.

"Why," exclaimed she, "both his feet have been shot off!"—*Youth's Companion.*

RICHARD HARDING DAVIS took his pen in hand awhile ago and wrote for *The New York Herald* an article describing a laparatomy performed on the cruiser *New York*. It was thrilling to the lay mind; it was bloody; it was a lurid picture, painted by a fleeting pen in the hands of an accomplished but over-enthusiastic and highly imaginative novelist. Mr. Davis said, in describing events after the operation, that the patient, lying on a cot, opened his eyes and saw the surgeons standing about him with arms covered with blood up to the elbows. Then he added that the operating table "dripped with blood." Surely these be bleeding war times, but we hope the *New York* recovered.—*Buffalo Medical Journal.*

DR. JOHN N. E. BROWN.—Dr. Brown left Toronto, July 29th, for the Yukon District, where he expects to remain for some time, having received an important appointment on the staff of Mr. Ogilvie, the administrator of that territory. He graduated in the University of Toronto in 1892, and during the following year was one of the resident staff of the Toronto General Hospital. Since 1893 he has practised in this city, and during these years has made for himself a host of friends, who, while they are ready to congratulate him on his appointment, regret exceedingly his departure from their midst. Before leaving several entertainments were held to do him honor and bid him God-speed. Among these probably the most memorable was that given by Dr. W. H. B. Aikins at his residence, July 27th, a large number of Dr. Brown's friends being present. We desire, on behalf of THE CANADIAN PRACTITIONER staff, to thank Dr. Brown for many acts of kindness and courtesy, and much valuable assistance rendered during his residence in Toronto, and, at the same time, we offer him our kindest wishes, and hope that health, happiness and prosperity may attend him in his new sphere.

THE ROYAL ARMY MEDICAL CORPS.—The following is the text of the Royal Warrant forming the Royal Army Medical Corps, which the Secretary of State for War has courteously sent us for publication:

VICTORIA, R.I.

Whereas We have deemed it expedient to alter in certain respects the conditions under which the officers employed upon the medical duties of Our Army are at present serving;

Our will and pleasure is that the officers below the rank of surgeon-major-general serving in Our Army Medical Staff shall be formed into a corps, together with the warrant officers, non-commissioned officers, and men of Our Medical Staff Corps;

It is Our further will and pleasure that the designation "Medical Staff Corps" shall be abolished, and that the corps formed as abovementioned shall be styled "The Royal Army Medical Corps."

The following alterations will consequently be made in the ranks of the medical officers of Our Army:

Present Ranks.	New Ranks.
Surgeon-colonel.	Colonel.
Brigade-surgeon-lieutenant-colonel.	Lieutenant-colonel.
Surgeon-lieutenant-colonel.	
Surgeon-major.	Major.
Surgeon-captain.	Captain.
Surgeon-lieutenant.	Lieutenant.

The medical staff of Our Army shall in future consist of surgeon-generals (ranking as major-generals), and the title of surgeon-major-generals now serving shall be altered accordingly.

Officers of Our Royal Army Medical Corps holding appointments in Our household troops shall be borne as seconded officers on the establishment of Our Royal Army Medical Corps, and shall be dealt with as regards pay and promotion in accordance with the rules laid down in Articles 384, 385, and 387 of Our Warrant for the Pay, Appointment, Promotion, and Non-effective Pay of Our Army, dated the 26th April, 1897.

Given at Our Court at Windsor, this 23rd day of June, 1898, in the 62nd year of Our Reign.

By Her Majesty's Command,

LANSDOWNE.

OBITUARY.

DR. JAMES BROWNE.—Dr. Browne died at his late residence, Toronto, July 16th, ten days after an attack of apoplexy, aged 82. He practised medicine for several years in Millbrook and Peterboro', but retired from active work many years ago. He had lived in Toronto for twenty-two years.

ROBERT DICKIE MOFFATT, M.D., C.M.—The many friends of Dr. R. D. Moffatt, of Toronto, were inexpressibly shocked when they heard, July 19th, that he had expired in a dentist's chair. He had suffered for some time from dental caries, and decided to have a number of teeth removed. Choloroform was administered by a competent physician, who noticed signs of failing strength after a comparatively small amount of chloroform had been inhaled. All efforts on the part of Drs. O'Reilly, Bray, Riordan, Elliott, Noble, and Gordon failed to resucitate him. He was 33 years of age, and had been prrctising in Toronto for several years. He graduated in McGill in 1888, and passed his final before the Ontario Medical Council the same year.

JOHN BEATTY, M.D.—Dr. Beatty was one of the oldest physicians in Canada, having commenced practice in the town of Cobourg in 1833. He was very successful as a practitioner, and also took a prominent part in matters outside his profession, especially politics. He was for many years one of the most influential men in Eastern Ontario. He gave up practice so many years ago that he was unknown to the present generation as an active physician. After retiring from active work he lived for many years in Cobourg, the scene of his earlier labors, highly respected by all classes. He enjoyed good health up to the morning of July 17th, when he was seized with faintness while sitting in his arm-chair, and died without a struggle in a few minutes.

CUB SAWBONES.

When we marched away with the starry flag,
Cub Sawbones carried his surgeon's bag,
But for me—I wanted "no rear" in mine—
I handled a gun in the fighting line.

So, when we had charged up the deadly glade,
Where the dons were lying in ambuscade,
I was there to take what the others got—
And the Spaniards gave it, plenty and hot.

There fell of our crowd in the Mauser hail
A third—and yet never a man did quail;
But—well, we went back—then came again,
And settled right down to our work like men.

In open order and firing at will
We crawled through a very rough skirmish drill—
From the trees to the rocks, from the rocks to the trees—
Just as close to the ground as we could freeze.

When I noted the tangled thicket sway
In front about twenty-five yards away,
I drew bead ready to loosen a storm
Till I caught a whiff of iodoform.

* * * * *

Cub Sawbones alone with the wounded folk
Was cobbling the limbs that the bullets broke.
He bent to his task with the tenderest care
Though the war bolts were hissing everywhere.

I hailed with our old-time college yell,
And he grinned as he watched a bursting shell.
"You have a great cheek to be here," he said,
"When you're not a doctor—or wounded—or dead!"

—*New York Sun.*

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Eulexine, a new therapeutic agent for the treatment of this disease, has been clinically tested by some of America's leading Medical professors and practitioners, who now use it exclusively for the treatment of their diabetic patients.

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CANADIAN PRACTITIONER

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MR. W. LLOYD WOOD.

PUBLISHERS :
THE PRACTITIONER PUBLISHING COMPANY,
TORONTO.

VOL. XXIII.] SEPTEMBER, 1898. [No. 9.

Original Communications.

SOME PRESENT METHODS OF TREATMENT OF PATIENTS AT THE ASYLUM FOR INSANE, LONDON, ONTARIO.*

BY A. T. HOBBS, M.D., ASSISTANT PHYSICIAN.

HISTORY.

IN the autumn of the year 1894 my attention was drawn to a couple of pamphlets written by Drs. Kirkley, of Toledo, and Rohe, of Baltimore, which detailed their observations of some gynecological work done upon insane women and their conclusions arising out of their brief experience in this new departure. There being a normal population of five hundred and fifty insane women in London Asylum, and as a large number of these became insane during the puerperium, it was reasonable to suppose that there must exist among such an aggregation many unsuspected cases of pelvic disease.

* Read at the meeting of the Ontario Medical Association, held at Toronto, June, 1898.

The pros and cons of the subject were carefully considered by my superintendent, Dr. Bucke, in conjunction with Dr. Meek, of London. As a result, we concluded to investigate the matter fully, and ascertain for ourselves whether much or little utero-ovarian disease existed as a complication in the already chequered lives of these unfortunates. Looking up the histories on which they were transferred for asylum treatment, we selected a number of women whose record seemed to indicate their having had, at some time previous to their committal to this institution, illnesses brought about by the accidents which maternity so often entails.

The first five cases we examined somewhat surprised us, as each case presented one or more lesions of the genital tract which would, in their sane sisters, imperatively call for relief. There were diagnosed in this quintet an ovarian tumor, a subinvoluted uterus, a perineum torn to the sphincter, a retroverted enlarged uterus, and a cervix hypertrophied and lacerated. Having thus brought home to us the prevalence of hitherto unsurmised ailments, our professional instincts impelled us to deliberate as to the appropriate method necessary to remedy this co existing physical disease of those already deranged mentally.

Before entering upon this new field facilities requisite to the prosecution of the contemplated surgical treatment had to be provided. We had, and still have, an apology for a hospital in two associated and overcrowded dormitories of twenty beds each, on the fourth storey of the main building; but had not at that time any equipment worthy of the name. We fitted up a room formerly occupied by some of the employees, adjoining these infirmary wards, with a crude, wooden operating table, a couple of gas stoves, some granite basins and surgical instruments. With these means constituting our whole armamentarium, we proceeded to test our theories as to the advantages of supplementing ordinary treatment by surgical aids.

We selected five or six of the aptest of our female attendants, instituted a course of training interspersed with anatomical and physiological lectures, paying special regard to inculcating all the many details involved in the nursing of the different forms of surgical cases. It gives me great satisfaction to state that we now have the co-operation of a band of nurses devoted to this special work and skilled in every particular requisite to the preparatory treatment and after-care of their charges. It is impossible to overestimate their valuable services in assisting to bring to a successful termination surgical operations done upon these irresponsible

mortals, the after-management of whom entails watchfulness and a capacity to assuage their various trying moods usually accentuated by their post-operative condition.

The constant admission of a large number of insane patients in addition to the existing population necessitated the appointment of one day a week to keep pace with the demands of surgical clinique. A regular staff of assistants had to be arranged for and several city doctors kindly volunteered their services in this connection. Dr. Meek, our consulting gynecologist, and Dr. Stevenson, our regular anesthetist, and Drs. Ferguson and W. Stevenson are always on hand to give Dr. Bucke and myself the advantage of expert help in the prosecution of this work. The institution and incidentally the Government are deeply indebted to those gentlemen who give so much of their valuable time without recompense in aiding in the amelioration of the miserable condition of so many of our suffering fellow-beings.

Another invaluable adjunct to our methods of treatment was the establishment of a massage department. We have now two specially trained nurses, male and female, devoting several hours of each day in effectually applying this very useful manipulation in properly selected cases.

Such then is a brief history of two of the recent methods of treatment which the institution for the care of the insane at London has recently adopted with so much success, the results of which I will now present to you in as concise a form as is compatible with the time at my disposal.

MASSAGE.

The scientific rubbing, slapping, and kneading of the muscular anatomy of a patient, which is known as "Massage," has produced results that will compare favorably with any method devoted to the increase of body weight and the generation of force known to us as vital energy. Many of our inmates on their admission appear utterly devoid of general tone and are much below their normal weight. These debilitated patients are usually the ones selected as appropriate subjects for the application of "Massage." They are either given a forty minutes' daily seance or undergo an hour's rubbing repeated three times a week. Preceding each manipulation they are given a cold or tepid bath, then the masseur applies an inunction of cocoa butter to the body and proceeds to perform his appointed task. When through his laborious work he sponges down the body with a solution of equal parts of alcohol and water.

After drying the patient the masseur concludes with a gentle but swift hand rubbing until the skin begins to glow. The patient is weighed weekly while undergoing this process and a careful record kept of any loss or gain in weight. During the first two weeks there is usually but little increase manifested. Succeeding this, however, a rapid and steady gain is noted, varying from a few ounces to three pounds a week. It is not an uncommon experience for a patient to add to his weight twenty to thirty pounds as a result of a few weeks' treatment.

The class of insane who have benefited mostly by massage have been the melancholics. These latter are almost universally subject to constipation, which becomes markedly relieved by the kneading of the abdominal muscles in the direction of the course of the large intestine. Among the useful adjuncts in the treatment of our clientele massage is certainly one of the best.

GENERAL SURGERY.

In an institution of the size of the London Asylum, with its one thousand mental cripples, there exist, as a matter of course, many cases of physical ailment which demand relief, and which are amenable only to surgical measures. Under the category of general surgery are included all operations performed other than gynecological. Of these there were thirty-two. The indications requiring surgical procedure were the presence of tumors, malignant or benign, depressions of the skull, caries of joints, appendicitis, hernias, and so forth.

The only ones requiring special mention are the radical cures of hernia, of which there were twenty-one. The prevailing type was inguinal, only one being a femoral. In all but one the Bassini method was followed with uniform success. The cure of the rupture, which meant the removal of a source of annoyance, gave general satisfaction to these patients, as many subsequently so expressed themselves. I desire to draw your attention to the fact that the post-operative history observed in these cases showed no mental improvement that could be attributed as a result of the operation done.

GYNECOLOGICAL SURGERY.

The most important of our present methods of treatment is the application of surgery. The eradication of pelvic disease is the most important advance that we have made in this institution in our methods of treatment among our female insane. In our work in this department there has been brought to our recognition a

serious fact, viz., that perhaps one-sixth, if not one-fourth, of all the women in asylums for insane are there because of the special infirmities of their sex and the disasters and penalties of their lives as wives and mothers. Our investigations and results in gynecological surgery have proved so remedial, its initiation has been fraught with results so unexpected, as to be hardly credited unless actually witnessed. We have already examined one hundred and thirty-six women with reference to the presence or absence of disease in any portion of the reproductive system. Out of this number, one hundred and twenty-six had organic lesions or malformations incompatible with normal genitalia. The one hundred and thirty-six women were selected patients out of a total of over seven hundred and fifty female patients under observation since the commencement of this special investigation. The one hundred and twenty-six patients in whom gynecic disease was located represents nearly seventeen per cent. of the total number of the normal female population. This large percentage of pelvic disease is almost incredible, especially to those who are accustomed to regard insanity as practically the only malady affecting the insane. But, if the brain is the prime seat of mental derangement, it should not be forgotten that it is only one of the organs that enter into the construction of the human machinery. Of these one hundred and twenty-six patients there were one hundred and twenty-one whose condition necessitated operative procedure for the restoration or amelioration of physical disorders which either caused or complicated disturbance of the nerve centres.

Interrogation of insane patients on symptomatology as an aid to diagnosis was practically valueless. The sexual delusion often portrayed by female patients afforded no help in arriving at a definite conclusion and usually, when present, were misleading. Ofttimes a patient has referred certain sensations as symptoms induced by the presence of an internal tumor, which, on examination, was found to have had only an imaginary existence. Their distorted mental faculties obscure their judgment and their perverted sensations are erroneously attributed to hypothetical sources.

Observation and question, which are of the greatest importance in determining the origin of ill-health in sane women, are utterly unreliable in establishing the presence or absence of any pathological condition of the pelvic organs in their insane sisters. It is a peculiar feature that the greater number of serious ailments discovered in our mentally-deranged females were only disclosed by actual examination. Without anesthesia it would have been manifestly impos-

sible to have carried out the various manipulations and instrumentations so absolutely necessary to a systematic examination of the pelvic organism in our asylum patients. The constant use of ether as a general anesthetic has thus far been unattended by any untoward effects. The insenitive condition induced by its inhalation is, in these patients, rapidly recovered from and is very rarely followed by any nausea or vomiting. Anesthetization for the purpose of examination is troublesome, but an examination of the insane without its aid is valueless.

A full analysis of the pelvic diseases in the one hundred and twenty-one operable cases would not be possible in this paper. A summary, however, of the various lesions diagnosed will give an approximation of their relative frequency.

Diseases of the uterus numbered two hundred and are subdivided into:

1.—Endometritis ..... 67 cases
2.—Subinvolution ..... 71 "
3.—Retroversions ..... 40 "
4.—Dysmenorrhœa and menorrhagia . 16 "
5.—Complete procedentia ..... 6 "

Diseases of the cervix uteri totalled eighty-four and were as follows:

1.—Hypertrophy ..... 26 cases.
2.—Lacerated ..... 36 "
3.—Cystic ..... 19 "
4.—Polypi ..... 3 "

Of tumors of the uterus there were ten and were classified into:

1.—Fibroid ..... 8 cases.
2.—Epithelioma ..... 1 "
3.—Sarcoma ..... 1 "

Diseases of the ovaries and tubes including cysts of all kinds numbered nineteen.

Injuries to the vagina, including fistulæ, were twenty-eight.

These made a grand total of three hundred and forty-one gynecological diseases in one hundred and twenty-one patients, which is apparently a large number of diseases; but many patients had more than one primary or secondary lesion. The following observations apply to one hundred and ten cases, comprising the total number operated upon, exclusive of a number of cases too recent to be presented in this report.

In the treatment of what is professionally termed diseases of women, gynecologists, like other specialists, differ as to methods. Many gynecological procedures, adopted as standards by the majority of physicians, are useless or inapplicable when applied to the insane. The employment of ovarian or uterine medication, the application of the Apostoli method for the reduction of fibroid tumors and the introduction of pessaries for displaced uteri and adnexa, could not be applied with even a fair modicum of success. The restlessness, meddlesomeness, and lack of control, inherent in the insane, would make medication a task laborious to the operator and likely to arouse an antagonism in the patient because of the necessity of its frequent repetition. The questionable potency of the electrical or Apostoli treatment and the difficulty of its manipulation prevented its adoption where apparently indicated.

The different mechanical devices or pessaries for the support of corrected displacements of the uterus were given a fair trial but had to be abandoned. These patients would not tolerate their presence in the via naturalis and would remove them soon after they were introduced. These were some of the difficulties that rendered unavailing recognized but tedious methods which in the main are only palliative even under the most favorable conditions.

The only radical treatment for the insane, as for the sane, with gross gynecic lesions, we believed to be that afforded by the resources of recent surgical science. Thorough preparation of surgical dressings, scrupulous attention in the observance of aseptic details, and a familiar knowledge of the technique involved in the various operations, now renders the most critical surgical operations comparatively free from hazard to the patient's life.

Since our resource to surgical aid, three and a half years ago, one hundred and ten women have undergone operative treatment, representing one hundred and ninety-six distinct operations. These embraced eighty-three curettages, thirty-eight trachelorrhaphies and amputations of the cervix, twenty-six operations for suspension of the uterus, twelve ovariotomies, seventeen hysterectomies, two laparotomies for tubercular peritonitis, one celotomy for removal of a broad ligament hematoma, and seventeen perineorrhaphies.

These operations were done primarily and specifically for the removal of physical disease and the promotion of bodily comfort. The finale of medical, dietetic, and hygienic measures in the general management of lunatics by all alienists is to bring the physique to the highest attainable point. If it is shown that surgical art can aid medical science in promoting this desideratum even among the

insane it should be added to the armamentarium of all hospitals devoted to the care of those wards of the State. Furthermore, if it is admitted that by surgical means sources of exhaustion, worry, pain and misery can be eradicated, and a state of good bodily health established, is it not reasonable to argue that mental improvement or recovery may result as a sequence to the restoration of the system to physical well-being? We maintain that our results thus far warrant us in urging asylum authorities to test the effects of the removal of operable gynecological disease among the insane.

Results: For the purpose of simplifying the classification of the one hundred and ten gynecological cases, and giving their present mental condition in brief, the main operation done on each patient will determine her classification in the accompanying table.

1. Of the twelve ovariotomies done, seven recovered, four improved, and one died on the twelfth day from pneumonia complication.

2. Out of seventeen hysterectomies—of which nine were vaginal and eight abdominal—there recovered five, three improved and two died, one the third day after the operation from exhaustion, and the other on the seventeenth day from secondary hemorrhage induced by patient on the fourteenth day by pulling out the ligatures.

3. The replacement of dislocated uterus was the operative treatment in twenty-two cases, either by the Alexander method or ventrofixation. Only four of this number have as yet recovered mentally, although eleven others have shown more or less mental improvement.

4. There were thirty cases in which the chief operation done was the removal of diseased cervices. Of these, twelve are now well mentally and nine others have improved. A most gratifying record.

5. Of twenty-one cases in which minor uterine diseases were removed usually by curetting, there recovered twelve and two improved. Also a most satisfactory showing.

6. The remaining eight cases embraced operations for vaginal lesions, fistula, etc. No mental recovery followed in any of these cases and in only three was there any improvement observed.

Reckoning the one hundred and ten cases together, it follows that 40 or over 36 per cent. were restored mentally, 32 or 29 per cent. showed an improved mental status, while in 35 or 32 per cent. the mental condition remained stationary, and 3 or less than 3 per cent. died within a month succeeding operation. It is due to us to state that no death has occurred from any operation during the past

two years, during which period the last twenty-six gynecological operations were done. I am also positive in stating that a number of those operated upon would inevitably have died were it not for the timely restoration afforded by the operation. Our improved results during the past two years were no doubt due to the increasing efficiency of treatment gained by experience, and especially a better knowledge of the most effective post-operative management of our cases.

A detailed though concise presentation of a few cases with the mental history, prior and subsequent to operation, will sufficiently exemplify the general effects of the treatment employed.

J. E. W.—Puerperal mania of seven months' duration. Forced alimentation had to be maintained for months previous to and for two weeks subsequent to operation. Had a delusion that if she ate any food she would immediately be decapitated. Examination revealed a flabby atonic subinvoluted uterus with pronounced endometritis. Thorough curettage was followed by mental recovery in three weeks. Has now remained well over two years.

A. S.—Chronic mania of two years' standing, strong and apparently healthy. Future mental recovery doubtful. Examination showed an extensive hypertrophy with a severe bilateral laceration complicated by a large subinvoluted uterus. Repair of the cervix and curettage of the uterus was done. She went home quite well in two months and has remained so for two and a half years.

M. F.—Chronic mania of two years. Diagnosed a retroverted subinvoluted uterus. Curettage of uterus and replacing it in a normal position by Alexander's method. She improved slowly and has now fully recovered. A recent letter states that she remains well and is managing her own household affairs. Two years have elapsed since the operation.

C. S.—History since puberty pointed to disturbed menstrual periods. As she grew older she became steadily worse. At time of operation she was twenty-six years old and had been declared a lunatic for five years, the last four of which were spent in an asylum. When transferred to London Asylum for special examination the case appeared to be absolutely hopeless. Diagnosis was made of an enlarged left ovary as big as an orange, which subsequently proved to be mainly cystic with a small amount of fibroid stroma, and the right ovary although small was found adherent to intestines. Uterus was small, being undeveloped. Ovaries were removed and patient made a rapid physical recovery. For two months there was no change in her mental condition, being at times excited, destruc-

tive and violent. At the end of two months she became suddenly well and has been so for sixteen months. She has been at home for a year and has taken her place once more in the household and society. She has menstruated regularly since the operation without the slightest discomfort.

A. F.—Was a remarkable case. She was picked up on the G. T. R. station platform, London, wandering around aimlessly. Could give no account of herself nor answer any question satisfactorily. Her mental condition was of a subacute or incomplete form of psychocoma. After being a patient for two months and no improvement apparent she was examined. Both ovaries were large and diseased and with uterus and tubes were prolapsed and adherent. Both ovaries and tubes were removed and uterus suspended to abdominal wall. For the succeeding two days she was very excited but woke up from sleep on the morning of the third day perfectly well. She gave us a complete history of herself and location of her friends and children (she being a widow) in Pennsylvania, where she returned after being under observation for six months, during which time she remained mentally and physically well.

L. S.—A case of chronic mania of erratic mental history for sixteen years. She is now thirty-two years of age. Always worse at menstrual periods. Examination disclosed a pelvic mass with very little mobility. On opening into the abdomen it was found that all the pelvic organs were bound together to the intestines by old, strong adhesions. The only operation offering any chance of success was a complete hysterectomy. This was done. Ovaries were several times larger than normal and fibro-cystic in character. A good physical recovery followed. She is still under observation although quite well mentally since the operation on the 11th of January.

F. W. T.— Delusional mania of five years' duration. Had been an asylum resident for two years. During the summer of '96 attention was drawn to an increasing abdominal protuberance. Examination disclosed a rapidly growing fluctuating tumor. After a delay of some weeks, consent to operation being given, the tumor and uterus adherent were removed. The contents of tumor proved to be three quarter fluid and one-quarter solid irregular mass, papillomatous in character. After a week's excitement she quieted down, gained rapidly in flesh, and was taken away by her friends in December. She is now discharged and her friends state she is very well.

When reflecting on the results which were attained in the one

hundred and ten female lunatics, one cannot but be impressed by the remarkable manifestation that follows the extirpation of diseased sections of the reproductive system in a number of the cases. The almost instantaneous resolution of the mental faculties in some, and the steady evolution of the normal cerebral functions in others, cannot but afford incontrovertible evidence in support of the relation of physical cause and mental effect. Proof of the interdependence of the brain upon the rest of the body and especially on the organism concerned in the genesis of the human species can be fairly demonstrated by the study of ordinary physiological functions. Witness the mental attitude of females during the development, continuance of active life and decadence of the sexual system. That their varying moods and hysterical phases are often exhibited during the periods is current knowledge to all medical practitioners. Is it not reasonable to assume that, if these delicate and complex organs are so commonly disturbed by periodical physiological causes, that the implantation of pathological conditions upon these causes, must in no usual degree disturb the mental equilibrium, especially in those predisposed to mental weakness. The validity of this inference is practically established in our experience by the good mental results that followed the removal of gross pelvic lesions.

And further, our experience in this special work brings out this important fact that the elimination of certain forms of utero-ovarian disease was usually succeeded by either a return to a normal mental state or a marked improvement in their mental condition. Also that there are derangements of these same organs which, when rectified, have little if any influence on the mentality of the insane, although the physical health may be immensely bettered.

For etiological purposes we may classify our cases into inflammatory and non-inflammatory cases. The former consisting of diseases of the ovary and uterus, arising from inflammation; the second, or non-inflammatory group, embracing dislocated uteri, accidental tears of the vagina, and new growths.

In the inflammatory group of sixty-three cases made up of twelve celiotomies for chronic ovaritis, thirty amputations for hypertrophied cervices and twenty-one curettages for endometritis: there was a mental recovery rate of over 49 per cent., over and above 23 per cent. who improved.

The non-inflammatory or mechanical group of forty-seven cases included seventeen hysterectomies for the removal of uterine tumors and complete procidentia, twenty-two replacements of dislocated uteri and eight cases of repair of vaginal tears. The subsequent

history of these forty-seven cases gave a recovery rate of only 19 per cent. and 36 per cent. in whom was noted some improvement. It should be stated in this connection that some of the recoveries following hysterectomy had chronic ovaritis in addition to the lesion for which hysterectomy was done.

Two explanations may be offered as a solution of the problem why inflammatory disease of the uterus and its adnexa are such potent etiological factors in exciting alienation in females. The first I will term the Reflex Theory. The innervation of all these pelvic organs is supplied from the same plexus, that of the inferior hypogastric, possibly the most important of all the nerve plexuses, controlling as it does the delicate and complex organic mechanism charged with the reproduction of the human species. The continual disturbances of these lower nerve centres incidental to inflammatory deposits must react upon the higher, begetting in some the delusional manifestations which determine mental alienation.

Internal Secretion Theory: In the recent physiological theory of internal secretion, we may find the true solution of the deleterious effects that diseased sexual organs exercise upon the distant seat of reason. Some physiologists claim "there is a normal and constant contribution of specific material by the reproductive glands to the blood or lymph and then to the whole body." (American Text-book Physiology, Ed., '96, p. 901.) Shaefer, in his Physiology, Ed., '98, p. 937, says of internal secretion: "That these (the generative glands) react upon the rest of the organism through the nervous system." Applying this hypothesis to pathological conditions of these same organs, it is not fair to conclude that instead of, as in health, the contribution of this great power in the induction of nerve force, there is precipitated into the general circulation an abnormal noxious element, distributing its virus throughout the patient's economy.

The introduction of these diluents of unknown virulence, invading the inmost recesses of the higher nerve centres, may engender an abnormal functionality in females possessing delicately poised minds. In the removal of these diseased organs, or by appropriate surgical measures directed to diseased sections, we can eliminate these sources of mental toxæmia. These causative factors being removed, the natural forces will gradually re-assert themselves in re-establishing the prior state of sanity. The theories enunciated are possible interpretations of the positive relations that certain pelvic diseases bear to insanity. If, in our experience, one-third of the gynecological cases recovered mentally and another third improved, such results support Prof. Michael Foster's statement in his

address before the British Science Association in Toronto last August, "that this, at least, stares us in the face, that changes in what we call the body bring about changes in what we call the mind. When we alter the one we alter the other."

We are not the only physicians in Canada who have had brought home to them by actual experience the relationship that exists between diseases of the organs of reproduction and mental derangements. Several independent observers have already placed on record sundry such cases that have occurred in their own private practice. Notable among these, I take the liberty of mentioning Dr. Holmes, of Chatham, who, in his thirty years of practice, had as many as twenty-four mental recoveries succeeding operations of this character.

Dr. Ernest Hall, of Victoria, B.C., not long ago examined a female patient in the asylum of that province who was suspected of having some lesions in the pelvis. Dr. Hall, who recommended operation, removed two fibro-cystic and adherent ovaries. The patient made a rapid recovery, both physically and mentally, and is now once more attending to her household duties after a residence of two years and eight months in an asylum as an apparently chronic hopeless lunatic.

Dr. Burgess, Superintendent of the Protestant Hospital for Insane, Montreal, reports having had to send three of his female patients to the Montreal General Hospital to be operated upon for utero-ovarian disease. All three patients were restored to mental and physical health as a sequence of the operation. Two of these cases and the one reported by Dr. Hall had fibro-cystic disease of the ovaries similar to that described in my own ovarian cases, and they afford certainly strong additional evidence of the causative relation of pelvic to mental disease.

In conclusion, I wish to say that I have no desire to magnify the value of surgery as a mode of treatment among the insane, nor do I want to claim that all the mental recoveries succeeding operation were due solely to its influence. I must emphatically state, however, that many of those who recovered their reason would not have done so without surgical interference. To hope to relieve these poor sufferers from both physical and mental derangements by simple incarceration and the well-nigh useless adjuncts of ordinary treatment, and to refuse these unfortunates the advantages which medical science offers to other women, is to reject the aids of modern science, to follow the methods of mediævalism, and to prefer to a modern hospital for the insane an old-time eighteenth century madhouse.

THE PHYSICIAN AND LIFE INSURANCE.*

By James Thorburn, M.D., Medical Director, North American Life Insurance Company, Toronto, Ontario.

IN my address, delivered before this Association in the city of Montreal two years ago, I alluded to the enormous amount of life insurance transacted by the various life insurance companies in Canada and the United States. Since then it has increased more rapidly than ever before in the same period of time, and at the meeting of the British Medical Association, held in Edinburgh last month, for the first time in the history of the Association a section was devoted to the consideration of Life Insurance, and was largely attended by some of the most eminent men.

To such an extent has life insurance been appreciated and laid hold of by the people of every civilized land that there is scarcely one of our profession, the world over, who has not been brought in contact with it directly or indirectly; and as this vast and far-reaching institution is taking a more important place in the economics of the world, as each year rolls by, it has occurred to me that it might not be out of place to refer to some features of the business which directly touch our profession.

In Canada, at the close of last year (1897), the amount of policies for which Canadian, British and American companies (exclusive of assessment and fraternal associations) operating in Canada were responsible for amounted to three hundred and forty four million, three hundred and fourteen thousand, four hundred and forty-eight dollars ($344,314,448); while in the Republic to the south of us the aggregate insurance of the regular life companies, amounted to no less than five billion, one hundred and eighty-three million, six hundred and ninety-four thousand, two hundred and fifty dollars ($5,183 694,250). These almost incomprehensible liabilities have been assumed by the life companies on the strength of the judgment, skill, honesty and integrity of the members of our honored profession.

* Read before the Canadian Medical Association at the annual meeting at Quebec, August, 1898.

That one of the greatest of all financial undertakings, one which affects probably more persons and more families than any other single business enterprise in the world, depends so largely upon the wisdom and probity of the members of our profession is perhaps one of the most eloquent and potent tributes that could possibly be paid to it.

In Canada the amount of insurances effected for the past twenty-two years, from 1875 to 1897, aggregated the large amount of $702,000,545. If to this be added the amount which the companies refused to undertake in consequence of defective family or personal histories, which I estimate would not be less than one-tenth of the accepted, or $70,200,000, we obtain an aggregate insurance applied for of $772,200,545. The average policy of insurance applied for is approximately $1,500, and I therefore estimate that the profession in Canada, during the period referred to, has been called upon to make not less than 514,667 examinations for life insurance companies. The fee for medical examinations varies with the different companies, ranging from about $2.50 to $5.00. Assuming an average fee of $3.50, I estimate that the profession has been enriched during these past twenty-seven years by life insurance companies operating in Canada by no less a sum than $1,801,334.

The premium rates for life insurance in Canada are based on tables of mortality constructed from the records of life insurance companies in Great Britain and the United States, and the materials entering into and which form the basis of these mortality tables are those select assured lives, which have been carefully examined, scrutinized and sifted. All lives presenting defective histories have been carefully discarded, and only those lives included which searching medical and other examinations indicated were good and eligible risks. The foundational element of selection, which enters into the calculation of premium rates charged by life insurance companies, is a most significant reason why only lives which are unexceptional in character should be recommended, and, on the other hand, why those lives presenting inferior or defective histories should be excluded. If the mortality tables, which form the basis of the premium rates of life insurance companies, had not been constructed from select material, but from the general population, then this vital point of recommending only first-class lives for acceptance would not probably have the force that it has under existing conditions. If a company is in the habit of insuring inferior lives on the basis of a mortality table constructed from select material, only one result can follow, and that is disaster and loss.

I have shown that the profession in Canada has been substantially benefited by fees for life insurance examinations. The average fee is in excess of what the average practitioner would receive for an equal amount of skill and labor exercised in his every-day professional duties. It appears, therefore, to me that the physician should give a full, satisfactory and complete report to his company, not merely answering the questions which have been proposed in the examination blank, but entering heartily, judiciously and earnestly into the merits of the case, weighing carefully the question in his own mind, whether the particular life, under all the circumstances presented—occupation, environments, personal history, family history and appearance—is likely to prove a profit or a loss, that is, whether the applicant is likely to live out the full expectation of life or die at a premature age. Any medical man who does not give all the facts within his knowledge, which will enable the company to satisfactorily determine whether the life is eligible for insurance or not, is lacking in his duty, and sooner or later his actions will be revealed.

As many of you gentlemen present will live to an old age, and will, no doubt, during your period of life, have the privilege of examining a large number of applicants for life insurance, I would point out to you that your capabilities and efficiency will most certainly be judged by your respective companies, according to the rate of mortality experienced on lives accepted on your recommendation. An examiner, whose record discloses a low rate of mortality, will be considered in the most favorable light, and his services will be appreciated and sought after; while, on the other hand, one whose record shows an abnormally high rate of mortality need not expect recognition or preferment from life insurance companies—he, most certainly, will not be sought after to perform the remunerative and important work which his carelessness and bad judgment have lost to him.

I would now like to refer specifically, for the benefit of the younger members of the profession, to a few points which I think should receive special attention in making an examination of an applicant for insurance.

Read over carefully each question proposed in the medical report form, and give an answer commensurate with its importance.

If a double question be asked, do not, as ninety per cent. of the examiners have done to my knowledge, answer the first part, and omit to answer the second part, and thus necessitate communication from head office. Ex. gr. "State the rate *and quality of the pulse.*" The *rate* will be given, but invariably the *quality* will be omitted.

If an applicant has had one of the numerous diseases which are mentioned in the blank do not simply state the fact of its occurrence, but make careful enquiries and record details, such as *origin*, *date*, *severity*, *duration*, *effect upon the constitution*, and give your own opinion as to its probable hereafter effect upon the applicant's life.

A very easy, but very unsatisfactory, answer, and one which it would appear the profession delight in giving, is "*don't know.*" This answer should rarely, if ever, be accepted, as positive or negative information should be forthcoming. Take for example the case of an applicant whose father and mother are dead; you ask at what ages, and from what diseases, they died. The very first answer that will come to the applicant's lips is "don't know," but by judicious, careful, tactful questioning, you will, in ninety cases out of a hundred, be able to determine the approximate ages at death and the diseases from which they died. If he cannot give you the information he will be able to suggest some member of the family who can. This should be followed up. The same remarks apply to the history of an applicant's grandparents, which history I know to be most valuable. The applicant, himself, in all likelihood, will know very little concerning his grandparents, but, if either or both of his parents are alive, the desired information can and should be obtained from them. As the examiner is paid a good average fee for his examination he should not hesitate to undertake the trouble involved to secure necessary and exact information.

Heredity is a subject which has had much fanciful speculation, but as to its influence on posterity there can be no doubt whatever. Where a trace of consumption exists in the family record it should be minutely enquired into, and, in addition to the applicant's own immediate family history, the following additional history should be secured:—

(1) The parents', brothers' and sisters' *ages*, and *state of health*, if living; or, if dead, *ages at death*, *previous health*, and *causes of death*.

(2) The same information regarding uncles, aunts and grandparents.

(3) The applicant's mode of life—active or sedentary—environments at home and in connection with avocation.

(4) Whether subject to colds, cough, etc.

(5) Use of stimulants.

(6) Weight compared with height; chest expansion.

Consumption is one of the most fatal of diseases and deaths

resulting from it are more numerous in life insurance companies than from any other single known disease. Although exhaustive personal examination may reveal nothing whatever abnormal, two cases of the disease in a man's immediate family history will usually be sufficient cause for rejection.

The history of syphilis in an applicant or his ancestors is a most serious matter. It is a disease of a most dangerous and insidious character, and an applicant personally exhibiting a history of it should invariably be rejected. After an apparent cure it may recur on the slightest exposure, and its influence is felt in many successive generations. One author has said, "In its wake, resulting from immoral degradation and the loss of constitutional vitality which it occasions, follow pauperism, licentiousness, blindness, deafness, diseased kidneys, lungs and heart, melancholia, headaches, neuralgia, rheumatism, epilepsy, chorea, consumption, discoloration of the complexion, scorbutic scars upon the lower extremities, and a disposition to oedema and dropsy."

Insanity is another disease which, if there be the slightest history affecting the applicant himself, or of any members in the family, should elicit most careful and searching enquiry. It is well known that any nervous disease in the parent may produce epilepsy in the children. Pietzel says, "The tendency to commit suicide has been transmitted from parent to offspring (usually from father to son) for several generations, and, strange to say, this tendency is frequently manifested about the same period of life in all members of the family—any nervous disease in a parent may produce epilepsy in the children. Hysteria, chorea, obstinate neuralgia, following even simple nervousness." Where there is any history of insanity the following points should be carefully analyzed:—

(1) Whether the applicant has, is now, or is likely to, come under severe mental strain, from business, domestic relations, or any other conditions.

(2) His past and present habits of life.

(3) The origin, duration and severity of the trouble which gave rise to the insanity in the applicant or his connections.

A few words on habits. Applicant's addicted to the excessive use of alcoholic stimulants should not be recommended. Other improper habits, such as opium, cocaine, chloral, etc., are sufficient to debar a person from obtaining life insurance. Intemperate men rarely confess the extent of their indulgence to the examining physician, but in private consultation they freely unbosom themselves. The examiner, therefore, has to probe carefully and deeply to as-

certain the applicant's habits. Such an answer as "temperate or moderate," are merely relative terms, and do not give a clear, intelligent and definite conception of an applicant's habits. The examiner should report:

(1) What liquor, if any, the applicant drinks.

(2) His daily habit. At what time in the day is liquor partaken of.

(3) His past habits.

(4) Whether he has undergone any special treatment for the liquor or drug habit.

(5) If he has any connection with the sale or manufacture of intoxicating liquors.

Those who have taken any special treatment for the liquor habit should be promptly rejected.

The reputation of a physician may suffer very seriously in consequence of a perfunctory examination. I have heard an applicant boast, when I have requested him to strip so that a proper examination of his heart, chest and lungs might be made, that "Doctor ..... of the ..... Assurance Company, simply placed his ear to my chest over my vest," and on other occasions I have been told that the examining physician did not even go so far as that, but simply gave the applicant a punch on the breast and one on the back. Such an examination must necessarily seriously injure the professional reputation of the physician, and reflect injuriously upon the company for employing such an examiner. The applicant should at least strip to the waist. Many diseases of the chest and abdomen have been brought to notice by variations from the healthy condition of the skin. A healthy man invariably has a healthy skin. Note should be made as to whether the skin is moist or dry; pale, blanched or livid; jaundiced or of that earthy hue which is suggestive of serious organic disease so closely associated with disordered nutrition, emaciation, sclerotic affection. The appearance and development of the chest should be considered and examined—whether enlarged and bulging or contracted and depressed.

It not infrequently happens that you are called upon to make an examination expeditiously and under adverse circumstances. The physician, if possible, should have the applicant come to his office, where he can perform the examination privately and carefully, and where he can conveniently secure all the necessary instruments and appliances. Under no circumstances should a third party be present at the examination; nor should an examination be undertaken if ample time will not admit of every care and scope being exercised

Be suspicious of the agent or the applicant who endeavors to make you rush through with an examination. *Don't be rushed.* To my knowledge persons have been insured on an examination being made on the rush who would have been *turned down* had the usual careful examination been made.

The pernicious custom of making examinations in business offices adjacent to machinery, or where much noise and confusion are present, results in many errors, especially in the examination of the chest. A quiet place should be chosen, where any minute variation in the character of the cardiac or respiratory sound would be discernible.

Never allow any other person but yourself to fill in the report. This is in direct contravention of the rules of all properly managed life insurance companies—but there are some agents who will endeavor to be present at the examination, and are plausible enough to secure your consent to write down the answers to the questions. The result of this, not infrequently, is that material information is omitted, or interjections inserted which are purely the imaginations of the agent.

Life insurance companies are not charitable institutions. They are business enterprises, and as such their affairs should be conducted in a defensible business-like manner.

There is another side to the subject, and that is that justice should be done to the applicant. Life companies do not desire risks which are not likely to prove profitable to them. On the other hand, it is a serious injustice to report carelessly or in such a way that the head office will form an improper opinion, detrimental to the applicant. If an applicant be rejected by a life company, that fact is registered in the offices of all the other life insurance companies, and will greatly weaken the applicant's chances of securing insurance at any other time.

In my observations I have noticed very unjust and foolish occurrences on the part of the physician and applicant. The applicant would tell the physician that he did not want the insurance, and ask him to make such a report on his life as would insure his rejection. The physician yields, probably because the applicant or the members of his family are his patients. What is the result? At some subsequent period the applicant desires insurance, but on applying is told that, owing to a certain previous condition of affairs, no company will entertain his application. An explanation follows that the statements previously made had been falsely stated by the applicant and physician. The result is that

the company is suspicious of the applicant's present statements, and refuses to entertain his application. If, however, upon investigation it is found that the doctor was implicated, he is, or should be, summarily dismissed from the company's service. An examiner should be above suspicion in this matter.

I have merely touched on some important features of life insurance, in so far as they concern the physician, but I think I have said sufficient to indicate the great responsibility which rests upon our profession in the discharge of one of the most important and sacred trusts committed to any class of persons. My conviction is that the system of life insurance is but in its infancy in this and other lands, and that, in view of the enormous money interests involved, the life insurance companies will expect the profession to be more in sympathy with their requirements, and that they shall exercise their best skill and judgment under every condition.

ANÆSTHETIC NOTES.

SELECTED FROM NUMEROUS ARTICLES IN "THE MEDICAL PRESS AND CIRCULAR."

BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children and St. John's Hospital.

I should like to say a few words about the administration of anæsthetics to children in surgical cases. Unfortunately, almost everyone seems to consider himself a born anæsthetist, and that when it is a question of giving an anæsthetic to a child he can perform that simple duty as well as, if not better than, anyone else. Without intending at all to detract from his own merit as an anæsthetist, he says to himself, "Anyone can give chloroform to a child!" Yes, that is quite true, so far as it goes. But it does not go quite far enough. The business is not completed until the child is given safe and sound to the parents again. And, upon my word, I sometimes wonder that this part of the arrangement does not more often fall through. That it does so seldom fail is, I fear, the result of good luck rather than good management.

I am glad to say that practical instruction in the administration of anæsthetics is now regularly given at St. Mary's Hospital, and the very fact of its being a needful course with us should suggest to students that the staff are of opinion that no man is born a master of the art, or even that he becomes one by attendance as a dresser or a spectator in the operating theatre.

A practitioner in the country pays me the compliment of requesting me to come down to perform some operation, and, asking me to fix a time, he often concludes his letter by saying, "My junior partner, or my assistant, will give the anæsthetic." I often wish that he wouldn't! If he is one of our old students, or if I am told that he has held some resident appointment, I possibly feel safer. But it often happens that I have to keep one eye on him and the other on the patient, and to do this is not to operate in comfort.

Young practitioners as anæsthetists may be classified according to their merit and abilities. There is, to begin with, Class A, which is composed of good administrators. This is a small class. Class B contains the nervous anæsthetists, and Class C contains the self-satisfied and reckless gentlemen. With your permission, I will, for the purpose of still further simplifying this grouping, place B and

C, the nervous and reckless men, together in one class, which I will call D. Class D is an extremely large class, for "D bad" comprises as well as describes the bulk of young practitioners as anæsthetists, and it is so because most of the self-satisfied members of it will keep saying to themselves, "Anyone can give chloroform to a child." There is but little hope for Class D. They go on till they meet with a catastrophe, and even this does not always stop them, or suffice to impress upon them a due sense of the importance or responsibilities of the office of anæsthetist.

I cannot attempt to explain the peculiarities of all the different varieties of Class D, but I may give a sketchy account of them. The "nervous" administrator sprinkles a few drops of chloroform on the mask, puts the bottle aside, and tries to feel the child's pulse. Then, having repeated the process two or three times, and finding that the child is, by chance, quiet, he tells me that I may begin. Unobserved, I give the child a little pinch, which makes him kick or cry. "Oh," says my friend, "I thought he was *under;* his reflexes are lost." Though I hold a different opinion, I say nothing, but stand patiently by until I feel sure that I may use my scalpel, without the entire household being thereupon disturbed by a piercing cry.

The reckless gentleman is, indeed, a terror! He positively slops the lethal fluid on to the mask. And when, shortly afterwards, he repeats the process, some of it drips through the soaking flannel and perhaps into the child's mouth. Some of it trickles into his eyes, or, like the patriarchal ointment, runs, metaphorically, down to the skirts of his garment. I say "metaphorically" from a desire to be truthful; for, as a matter of fact, I have never seen the chloroform actually run down to the skirts of the child's clothing. Perhaps because the child on whom chloroform is being administered ought to be, and is, lying flat. But I have seen the fluid soak into the hair, the pillow, and the mattress, and even form a little pool upon the floor. All this while the gentleman may be conversing with his chief concerning certain patients attended by him that day or subsequently to be visited. I suppose he has given chloroform a good deal—perhaps to a dozen or twenty children—so that he has become hardened in his work, and I sometimes wonder if, like the callous clown who was digging Ophelia's grave, he will break out singing.

When the anæsthetist is becoming conversational, I usually interrupt him by asking him in a suggestive manner if the patient is all right. Sometimes he sees what I mean by my question; but,

as might be expected, he more often does not. I need hardly say such a gentleman is a source of great anxiety. And I think there would be little blame if, on the conclusion of the operation, I declined the tea which the child's mother has thoughtfully prepared for me, and, instead, helped myself liberally from a small decanter on the sideboard.

The good anæsthetist minds his own business, and I can assure you that it is quite enough for him always, and occasionally more than even he can conveniently manage. He does not watch the operation, and he certainly does not speak an unnecessary word. To carry on a running or even an interrupted conversation with anyone while the patient is being anæsthetized he would, with me, regard as little short of criminal.—*The Young Practitioner and the Sick Child, by Edmund Owen, M.B. Lond., F.R.C.S., in The Medical Press.*

Further Chloroform Facts.

If the evidence tendered before coroners in reference to deaths under chloroform could be accepted as scientifically accurate and trustworthy, then chloroform would certainly have to be regarded and treated as one of the most erratic and dangerous agents known to us. It is often stated, glibly enough, that the victim had not inhaled more than a couple of drachms or so before breathing ceased. This we flatly refuse to believe, experience leading us to the conclusion that the anæsthetist merely guessed at the amount, and took care to "guess low." Sometimes, as in the last case on which we commented, it is frankly admitted that five or six drachms were poured on to the towel—amply sufficient to cause alarming symptoms if any large proportion of the vapor found its way into the lungs within a comparatively short space of time. At an inquest held last week at Bisham, near Wigan, on the body of a student who had succumbed while chloroform was being administered for the purpose of dealing with an arm damaged at football, it was stated that only *two-thirds of a drachm*, that is to say, forty minims, had been used when respiration ceased, death being attributed to paralysis of the respiratory centre of the brain induced by the anæsthetic. Although the method of adminstration is not described, we cannot help thinking that two-thirds of an ounce must have been meant, for it is inconceivable that the smaller amount could have determined dangerous symptoms, or indeed, any symptoms at all. The time will probably come when every case of death under an anæsthetic will be enquired into by a medical expert appointed

by the Government. It is not so much the fatalities as the circumstances under which they occur that excite one's indignation.

Chloroform in Adenoid Operations.

The choice of an anæsthetic in cases of removal of naso-pharyngeal adenoids might have formed a useful, interesting, and practical subject for discussion in the Laryngological Section at the current meeting of the British Medical Association in Edinburgh. Attention has again been drawn to the disadvantages of chloroform in such cases by the report of a fatal case under this anæsthetic in the *Laryngoscope* for this month. The patient, who was under the care of Dr. Hintrel, of Buffalo, N.Y., was a boy of eight years of age. The chloroform was administered carefully by a skilled anæsthetist. He was taken badly with vomiting and severe spasm of the glottis. On account of the vomiting and incidental delays, about one ounce of chloroform was administered in all. The administration was stopped in order to allow of the performance of the operation, the pulse at the time being good. The operation occupied but a very few moments. Just at its conclusion the boy gave a few hurried gasps, and respiration and pulse ceased at once. No post-mortem was allowed. In discussing the case Dr. Hinekl affirms that the brief anæsthesia usually required for the adenoid operation may be obtained in the majority of cases by nitrous oxide and ethyl bromide, or ether may be used, and his conclusions are as follows: (1) Statistics show an exceptionally high mortality from chloroform anæsthesia in the operation for the removal of lymphoid hypertrophies of the pharynx. (2) The observations of the Vienna pathologists show that sufferers from adenoids frequently belong to an abnormal constitutional type that has been found peculiarly susceptible to chloroform narcosis. (3) In view of the statistical and pathological data presented, the general use of chloroform in the operation for hypertrophied tonsils of naso-pharyngeal adenoids is inadmissible. These views will probably accord with those held by the majority of laryngologists in this country. Nevertheless, we believe that chloroform is still largely used in adenoid operations.

The Last Chloroform Fatality at Birmingham.

At the inquest on the body of the little girl who died at the Infirmary under chloroform after undergoing an operation for the removal of post-nasal adenoids, the jury added a rider to their verdict enjoining on hospital authorities to obtain the consent of

parents in writing before administering an anæsthetic. More to the point would have been a question as to why gas was not administered instead of chloroform, especially as many throat specialists hold that the latter anæsthetic ought never to be resorted to for such a short and trifling operation. Had there been a medical assessor he might also have asked sundry questions as to the precautions taken to avert the recognized contingencies associated with this particular operation. Unfortunately the report of the proceedings gives no information on most of the points one would like to have discussed.

A Lady's View on Chloroform Administration.

In one of the monthly reviews for this month a lady discusses the question of chloroform administration under the head of "Death and Torture under Chloroform." The burden of her complaint—for her article is an attack upon the present mode of administration—is that "chloroform is frequently administered in such a way as to cause extreme and unnecessary suffering"—and she brings charges against anæsthetists of "a certain school" whose practice is to forcibly stifle the patient into unconsciousness. This, we learn, is caused by the inhaler or cloth being held close over the nose and mouth, and when this is the case needless suffering, she affirms, is inflicted upon the patients. She speaks with scorn of the "school of stiflers," as she calls the anæsthetists who adopt this method, and further states that the only chance to effect any reform in this regard is to make it illegal for the inhaler or cloth in chloroform administration to be held nearer than a regulated distance from the face. The assertion is made that numbers of medical men object to the close method of administration, but that it is impossible for them to intervene, inasmuch as the anæsthetists would not listen to any remonstrance. Lastly, it is suggested that every patient should refuse to be chloroformed until it has been ascertained what method will be employed by the anæsthetist, and until a guarantee has been given that only an open cloth will be used, and that at a distance that will permit of entire freedom of respiration throughout the operation. It will be observed that both remarks quoted above and the suggestion are novel, but they cannot be taken seriously. Any attempt to generalize upon such a matter and draw up rules for future guidance would be found impossible from a practical point of view. Anæsthetists must be conceded the right of knowing their own business best, and they must be

left to employ that mode of administration which, in the interests of the patient, experience has taught them to be the safest. Of course, out of many thousand administrations there will be certain to be a few patients who have objection to make. But such complaints can only be regarded as illustrating the old saying that "it is impossible to please everyone."

Death Under Chloroform at Edinburgh.

A death took place under chloroform at the Edinburgh Infirmary a few days since, the victim being an out-patient who had dislocated one of his finger-joints. In view of the method of administration which is almost exclusively resorted to north of the Tweed, the history of the mishap is instructive. The report says, "After the first few inhalations the patient began to shout loudly, kick about, and fight, and it required the force of four or five doctors to hold him down." This, we have often pointed out, is the invariable result when a patient is made to breathe the air so laden with chloroform vapor as to be suffocative. It is, therefore, not surprising to read further on that "signs of asphyxiation then set in," and the man died. When will anæsthesists learn that restlessness is a protest on the part of the patient against too strong a vapor? Probably not until many other victims have paid the penalty of an unscientific method of administering a powerful and, when unskilfully handled, lethal, drug.

Selected Articles

THE STETHOSCOPIC AUSCULTATION OF PERCUSSION.

(CONSIDERATIONS UPON THE TECHNIQUE OF THIS METHOD APPLIED TO THE STOMACH.)

By DR. P. VILLARI.

THE delimitation of the stomach, especially in its pathological condition, has been, during the last few decades, the subject of profound study, particularly by Italian physicians, because all have been aware of the too frequent fallacious results of direct percussion of the stomach, which is surrounded by viscera almost equally resonant. The experience of the uncertainty of this method has made more urgent the need of surer means and indeed new methods for the delimitation of the gastric area have gradually been brought to light.

At the present time, the method of Frerichs and that of Piorry are preferred for this purpose.

Frerichs' method often gives rise to erroneous deductions. In the first place the different diameters of the stomach, especially if a tumour or other affection be present, may be changed by the tension from gas. In the second place the distension of the gastric walls can vary greatly, according to the employment of large or small quantities of effervescent powders. Moreover, in certain persons, it often occurs that the tympanitic resonance of the colon cannot be distinguished from that of the stomach, and so in practice it happens that the two resonances are added together, giving rise to wrong conclusions. Finally it is always possible to have an incontinence of the pylorus, which, as Ebstein has shown, makes an essential change in the condition found, since the gas, instead of remaining confined in the stomach, flows out into the bowel through the open orifice.

Piorry's method, which consists in fixing the inferior limit of the stomach, as that which has the greatest diagnostic value according to Maraghano, is most applicable in practice. It has, however, its defects. First of all, we must introduce a proper quantity of liquid into the empty stomach, in order to produce the dull zone on the abdomen, which indicates, in the erect or half-sitting posture, the boundary of the greater curvature of the stomach. Further, not all patients can have this method tried on them, especially when their stomach will not tolerate the slightest distension from liquids. And lastly, according to the greater or lesser amount of liquid introduced into the stomach, its lower boundary is essentially changed.

Many other methods have been propounded, especially for fixing the greater curvature. Thus Leube uses a rigid gastric sound, which he introduces into the stomach and palpates its lower extremity through the abdominal walls. Ferber has thought of utilizing the noise of stomach splashing, called forth by little shakes upon the epigastric region. Purgecz adds to the sound a manometer which gives positive pressure as soon as it passes the cardiac opening; the rest of the sound, which still enters, shows the vertical diameter of the stomach. Schreiber introduces a sound with a bladder, which swells up the stomach. Mader proposes in doubtful cases to fill up the colon, from the rectum, with gas or fluids. All these methods, while having their good points, are difficult to apply clinically, and often give unreliable results.

The stethoscopic auscultation of percussion is a method which deserves to be counted among the best. It is, as I shall show, most reliable, and we can, without fear of erring, prefer it to all other methods. It must not be confused with auscultatory percussion, which consists in percussing upon the anterior or posterior wall of the thorax, or listening with the ear placed on the wall. The stethoscopic auscultation of percussion can be applied to all the organs of the thorax and abdomen.

The method is not of ancient date. In 1840 Canman and Clark, by means of a wooden stethoscope, listened to the different regions of the body, which they, percussing, caused to vibrate more or less. Experimenting thus on the different parts of the body, they affirmed that they could clearly limit the cardiac area and the liver, and also obtain important results for the spleen and kidneys in cases of ascites. Canman and Clark, in the application of their method, considered it a *sine qua non* that there should be two observers, one to listen, the other to percuss. Bartk and Roger,

while recognizing that the stethoscopic auscultation of percussion is a great help in clinical diagnosis, held that it was difficult to apply in practice. Roncati likewise wrote that such a method was too complicated on account of the necessary presence of two persons. MacBride, by constructing a special stethoscope, made with two tubes of caoutchouc, curved so as to be united below and above, capable of being introduced into the auditory meatus, removed the greatest objection put forth by Canman and Clark.

In later years DeDominicis, and especially Bianchi, have studied the question of the stethoscopic auscultation of percussion. The latter established the fact that there is a general law which governs the development of phenomena already observed by Canman and Clark. He then extended the field of the clinical and practical applications of this method, to all the organs of the thorax and abdomen.

Bianchi starts out from the idea that any body percussed gives vibrations more or less deep, according as the body is more less dense. Thence comparing various bodies of different densities and percussing, we shall find that the vibrations caused by that percussion do not transmit themselves to the neighboring bodies. The observation is strengthened by an experiment. Place rubber balls in contact with each other, so as to leave no space between ; applying the stethoscope upon one and percussing it, one perceives a fairly marked vibration, which does not become more marked, when, instead of percussing the ball on which the stethoscope rests, the next ball is percussed. We perceive thus a distant percussion sound, but not clear and distinct vibrations. Keeping some of these balls and placing beside them others solid or full of liquid, we obtain still the same result. We conclude, therefore, that the vibrations of the percussed ball do not transmit themselves to the next one, and that the degree of the vibrations varies according as the body is more or less dense.

What happens in the experiment, says Bianchi, happens also in the human organism. We shall obtain, auscultating and percussing a given organ, only its vibrations ; the other organs surrounding will not participate in any degree in the sound given to the auscultator. Moreover, the vibrations of a body are perceived, although the percussion may be upon an organ situated over it. The blow is thus transmitted to that auscultated, and since this is in communication with the ear, only its vibrations are perceived, these being caused by the transmitted blow. And so, in Bianchi's opinion, the stethoscopic auscultation of percussion is an important means of examina-

tion, which can, with exactness, fix the limits of any organ of the body.

The theory of Bianchi is not free from objections. Physics tells us that any body percussed gives vibrations ; "no body can give sound without entering into more or less rapid vibrations." The vibrations, however, are not of themselves high or low. "The degree of the sound depends only on the number of vibrations executed in the unit of time by the sonorous body." That is to say, when the number of vibrations increases in the unit of time, the sound becomes more acute or high ; whereas it becomes lower when this number diminishes. Moreover, the sonorous vibrations propagate themselves through all the bodies, solid, liquid, or gaseous. If Bianchi had experimented not with rubber balls, but with balls of glass or any other body, he would have perceived, percussing always the same ball, the vibrations upon all the others. Caoutchouc is a substance which transmits sound very badly. I have taken different balls of glass, have suspended them each on a string, and have placed them in contact ; percussing always on one ball, I have perceived the sound with the stethoscope upon all the others. The sound, however, was of maximum intensity upon the ball percussed and auscultated ; of least intensity upon the most distant ball. Moreover, the sound gradually diminished in intensity as I proceeded to auscultate upon the balls in order from that percussed ; so that, even to an experienced ear, it was impossible, with closed eyes, to distinguish whether the stethoscope rested on the second, on the third, on the fourth ball, from that percussed. This agrees with the law of physics, that sound diminishes with distance, and that it is still further attenuated by the objects of any sort which are placed upon its path.

What happens in the experiment, happens also in the different parts of the organism. The different organs of the body are in close contact, and hence it follows that the vibrations caused in a given organ are transmitted to the organ near it. These vibrations are thus combined, acquire a special pitch, and especially to an ear not experienced in this kind of research, affect essentially the limits of any organ. Further, in the human organism, the depth of the sound of the various organs varies, according to their greater or lesser thickness, their volume, their tension, and their density.—*Translated from "Giornale Internazionale delle Scienze Mediche," by Harley Smith.*

(To be continued.)

Progress of Medicine.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF

PRICE-BROWN, M.D.,

Laryngologist to Western Hospital; Laryngologist to Protestant Orphans' Home.

At the opening of the section on Laryngology and Otology, at the recent annual meeting of the British Medical Association, at Edinburgh, the president of the section, Dr. Peter McBride, delivered the following address (*British Medical Journal*, August, 1898):

The Expansion of Laryngology and Otology.

The time is long past when there was a necessity for defending the existence of laryngology and otology as special branches of study. It used to be said by the opponents of specialism that it tended to a narrowing of the mental horizon on the part of its votaries. The inclination now is rather to complain that the surgical limits of our specialties are being unduly extended. Indeed I have been told that a well-known teacher of surgery in this school is in the habit of demonstrating a very small area in the neighborhood of the umbilicus, which in the near future will represent the region upon which the general surgeon will still continue to exercise his skill.

Experience has shown that no charge of mental narrowness can be brought against the best workers in our specialties, but the danger of excessive extension is, perhaps, more real. Let us consider first how easy it is for the laryngologist gradually to extend his field, both on the medical and surgical side. You are all familiar with the indications of general disease which are often first detected by the laryngoscope. We discover, it may be, some lesion of the chest, nervous system, or even kidneys, which we feel ourselves perfectly able to treat, and so, unless the laryngologist be careful, he may be led to encroach seriously upon the domain of the general physician.

Turning now to the surgical aspect of the same specialty, the old rule used to be to call in a surgeon when external incisions were required. Of course to carry out this absolutely would be impossible, for tracheotomy is an operation we must all be prepared to perform when the indication is urgent. The laryngologist of to-day, however, does not confine himself to this. He performs thyrotomy and excisions, removes goitres and sometimes cervical glands, so that he thus annexes, as it were, a considerable portion of the general surgeon's territory. If these operations are to come within our sphere of work, then it almost logically follows that we shall in the near future undertake external operations on the œsophagus and stomach, as well as extensive dissections involving the removal of tumors from the neighborhood of the large vessels of the neck.

In otology there is the same tendency towards extension on the surgical side. Thus the aurist no longer fears to open a cranial cavity, nor does he hesitate to perform such operations as ligature of the internal jugular; he has not, however, the same direct temptation as the laryngologist to enlarge his field at the expense of the physician. The same expanding tendency may be observed, too, in connection with the nose, although here there is not quite the same scope.

I am content, gentlemen, to place these facts before you. There is a good deal to be said for and against this growing desire of the younger specialists to annex fresh territory. It is a question for each one of us to decide for himself how far he shall take part in this policy of expansion. Only if it creates against us a certain feeling of antagonism on the part of physicians and surgeons we must not be surprised, and I think much could be done towards mitigating such antagonism by taking care that our position—be it in the van or rear of this movement—is logically unassailable.

Another direction in which our expanding tendencies have manifested themselves is in our immense literary activity. I suppose I shall not be considered far wrong in saying that most of the best that is written sooner or later finds its way into English, French and German, as being the most widely known languages, although we are well aware that much excellent matter makes its first appearance in Russia, including Poland, Scandinavia, Denmark, Holland, Spain and Italy. To most of us, however, only those works which appear in the three languages first referred to are accessible.

It may not be uninteresting to glance for a moment at the most striking national peculiarities of our literature. The Anglo-Saxon writer (whether European, American or Colonial) usually aims at

brevity, and on the whole I am inclined to think that there is a slight tendency to put points of purely scientific and theoretical interest on one side in favor of the more directly practical, and in some cases to dispense with all literary references to the subject treated of. In striking contrast to the Anglo-Saxon is the German author. In his work we find the most elaborate attention to detail, and a very strong tendency to discuss the subject from every possible point of view, and even then not always in the fewest possible words. His literary references to the works of his compatriots are generally full and accurate, but this cannot always be said of those to foreign literature, and withal he is not over tolerant to the foreigner who overlooks a Teutonic authority. Moreover, there is among Germans a great tendency to polemic writing, and sometimes even to personality. With all these drawbacks, however, we must admit that the best literature in our specialties at the present time is produced from Germany. It may be because of the large number of workers, or due to greater facilities afforded by the Government and circumstances of the country, but the fact remains. As we all know many excellent works emanate from French pens, and in the absence of polemical writing we have reflected the racial courtesy. It has sometimes appeared to me as if the amount of material did not quite justify the existence of all the journals which are devoted to our subjects in that language, but the frequent appearance of excellent, interesting and original articles in all of them must be fully admitted. In speaking of French journals, however, I cannot refrain from noticing the odious custom of interleaving advertisements with the text—a practice which certainly cannot conduce to the dignity of medical journalism.

Let us now turn from national to individual characteristics, for in the study of the individual we come nearer the forces which make for and against expansion.

The first and best type of author is undoubtedly represented by the man who has really something new and valuable to communicate. It may be the result of scientific research or of clinical observation, while sometimes it takes the form of valuable generalizations, deduced from facts either original or quoted from literature.

There are, however, numerous other and less praiseworthy types. We all know that in most instances diseases which are least amenable to treatment are those for which innumerable curative agents have been recommended, and further, how each new remedy is said to be followed by numerous successes, often occurring only in the hands of its inventor. When the method employed is harmless, little mis-

chief results, but when operative measures are advocated in this way a grave evil arises.

A danger of specialism has always been the tendency of some specialists to magnify the importance of the part of the body with which they are familiar, and I do not think that otology, laryngology, and rhinology can plead that their votaries have been altogether guiltless in this respect. Specialism is only good so long as it rests upon a broad basis of anatomical, physiological and pathological facts; and so long as no attempt is made by writers to juggle with these facts in order to elevate the part at the expense of the whole, it would be ill-judged to give any examples, but no doubt works will occur to some here in which this mistake has been made.

Far be it from me to suggest that there are many writers who indulge in misrepresentation. Absence of the highest critical faculties, and a limited knowledge of general medical and surgical science, sometimes associated with an almost morbid desire to magnify the importance of a special organ, account for much writing which is ill calculated to bear the clear light of criticism.

Again, what I may call undue therapeutic credulity is responsible for much that is scientifically worthless. It is but rarely, I trust, that lower motives, such as a desire to establish a temporary notoriety, and to benefit directly therefrom, actuate authors in our specialties. Still, it must be remembered that we are but human, and that there is no more certain way of establishing a reputation of a sort than by originating some new and startling theory, remedy or operative procedure. Under these circumstances, would it be surprising if some, driven by vanity, and others spurred on by hopes of aggrandizement, were to fall before the temptation?

Let us finally turn to another great difficulty which has arisen of late years, and which confronts the serious student, not only of laryngology and otology, but of almost every branch in medicine and surgery. It is, of course, necessary for every specialist to follow the literature of his subject, but perhaps the burden falls most heavily upon those who are engaged in lecturing and upon writers of text-books. All of you know how voluminous are the works devoted to our specialties; you are aware of the numerous journals which appear in French, German and English; there is further a considerable array of monographs, and finally we have an ever-increasing number of text-books. All this bears very heavily upon the conscientious reader, for it must be remembered that until a work has been read it cannot be classified or criticised. No separa-

tion of "wheat from chaff" is therefore possible without an immense amount of wasted time and energy. Among our large current literature there is much that is good, but more that is valueless. This may seem a rather sweeping statement, but if you will throw your mental glance back over recent years and compare the actually valuable additions to our knowledge with the amount written in the same period I am sure that you will agree with me that they are not proportional; indeed, we might not be far wide of the truth in calling them inversely proportional. It may be urged that the system of abstracting papers, now so largely in vogue, is of value in saving time and labor to the over-burdened student. No doubt this is to some extent true, and certain journals are, by employing a carefully selected staff of workers, enabled to present an epitome of all that is being done in various parts of the world. It is, however, necessary to warn readers that such abstracts are by no means always correct representations of authors' views, and it is perfectly certain that some periodicals which profess to give abstracts of current literature are lamentably defective, in so far that they confine their attention to reviewing only articles which appear in a few of the better known journals of each country. I have thus merely outlined some of the difficulties which every experienced reader can fill in and amplify for himself. The important question I wish to bring forward is, Can this be remedied? It appears to me that it might be by adopting some such method as this:

1. The establishment of a body composed of men of ripe experience and wide reading in each country equivalent in position to the *collaborateurs* of the *Centralblatter* and journals of to-day.

2. The selection of two or three of those *collaborateurs* to form a small central committee in each metropolis.

3. The employment of a staff of abstractors composed of young workers.

The advantages of such a scheme would be obvious. The *collaborateurs* would each have assigned to them certain journals, and it would be their duty to send in a return to the central committee, indicating the names of the papers which were considered worthy of a place. The list so accumulated would be again checked by the central committee, and in this form handed over to the abstractors.

It will be seen that the adoption of some such method as this would produce a periodical of reasonable dimensions, because many published works would probably be rejected by those responsible for selection. Of course, we have something similar in the various

year books, but it must be remembered that the reading specialist can hardly accept any single author as his guide; while, on the other hand, he might be quite satisfied to have the important works chosen for him by a strong, responsible committee of each country.

In conclusion, I beg to say that I desire in no sense to reflect upon the excellence of works which endeavor to give, and in some cases actually do give, abstracts of nearly all papers which are written on our subjects. In doing so, however, they must give the bad with the good, for, although every now and then we find an abstractor bolder than the rest who describes a paper as containing nothing new, yet a desire to avoid discourtesy prevents this being frequently done. If it were once understood that only papers of importance were to be abstracted an immense amount of space would be saved, and a most valuable publication would result, which, if it were published in English, French and German, ought to be commercially as well as scientifically successful.

Tracheotomy under Local Anæsthesia.

B. Franckel (*Berl. Klin. Woch.*, June, 1898) has performed twenty-three tracheotomies under cocaine during the past three years. Many of these have been performed under circumstances in which it would have been dangerous to have given a general anæsthetic.

His plan has been to inject hypodermically a 20 per cent. solution in two places near the site of operation; or a 10 per cent. solution in four places. In children the 10 per cent. solution was always used. In adults the amount injected was .04 grm. of cocaine.

Patients dreaded the cocaine less than the chloroform. One of the advantages of operation under local anæsthesia is the removal of all necessity for undue haste.

Malignant Polypus of the Nose.

Hunter Mackenzie (*Brit. Med. Jour.*, July, 1898) gives the history of a case of this exceedingly rare disease. The patient, female, aged 60, had nasal polypi on one side and malignant polypus on the other. The sarcoma was not discovered until late in the disease. Several attempts, by snare and galvano-cautery, were made to remove the growth. Only portions were taken away, and each time the bleeding was severe. Finally the patient died. Microscopical examination proved it to be a round-celled sarcoma.

The point that Mackenzie dwells on particularly is the impor-

tance of early diagnosis. This depends mainly on two facts—1st, the occurrence of repeated attacks of bleeding; and, 2nd, the site of attachment of the neoplasm. It is usually sessile, and is attached to some portion of the septum.

Laryngitis Exudativa.

Schech (*Munch. Med. Woch.*, June, 1898) gives an account of this disease. In it there is inflammation of the laryngeal mucous membrane, accompanied by exudation, which may either be apthous, vesicular, or herpetical. The disease may be either acute or chronic. It likewise very frequently recurs. Although the prognosis is generally favorable, death will sometimes arise from asphyxia. Treatment by gargles and sucking ice. Arsenic should be given internally.

PEDIATRICS.

IN CHARGE OF

W. B. THISTLE, M.D., L.R.CP., Lond.,

Lecturer on Clinical Medicine and Diseases of Children, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College

AND

W. J. GREIG, B.A., M.D.

Nothing of greater interest or of more importance has occurred in pediatrics during the year than the collective investigation by the American Pediatric Society on the subject of Scurvy. Subjoined is an epitome.

American Pediatric Society's Collective Investigation on Infantile Scurvy in North America.

The information on which the report is based was obtained from the personal experience of the members of the committee and from answers to circulars sent out to the professors of pediatrics in all the American medical colleges, and to all physicians applying for them, or who had reported cases in the journals.

Altogether 379 cases were gathered. The most important information obtained may be shown under the following headings:

Age. The disease is most apt to develop between the ages of seven and fourteen months. The youngest child was one of four weeks, and the oldest of nine years.

Social position. The fact that eighty-three per cent. of the cases occurred in private practice, and in 303 cases the hygienic surroundings were said to be good, shows that the disease is more apt to occur among the well-to-do.

Previous Health. In the majority of cases the health had been good. In 118 cases the child had suffered from various diseased conditions; most of them must be regarded as accidental and to have had no causative relation to the scurvy.

Diet. This is the most important etiological factor. In answer to the question "Do you believe that the food had anything to do

with the development of the disease?" there were affirmative replies in 275 cases, negative in 24.

Food Given—

Breast milk alone in	10 cases.
" with raw milk and amylaceæ	1 case.
" " sterilized milk and amylaceæ	1 "
Raw milk	4 cases.
Milk (nothing said about heating) alone	8 "
Peptonized milk	4 "
Amylaceæ with peptonized milk	4 "
Sterilized milk alone	68 "
" " with proprietary foods	21 "
" " " amylaceæ	8 "
" " peptonized	10 "
Pasteurized milk alone	16 "
" " with proprietary foods	2 "
" " " amylaceæ	1 case.
" " peptonized	1 "
Peptonized milk alone or combined	14 cases.
Amylaceous Food (not proprietary) alone	6 "
In various combinations (nine of oatmeal)	18 "
Table food (nothing else mentioned)	11 "
" with condensed milk	1 case.
Mellin's food (nothing further stated)	42 cases.
" with milk condensed, sterilized or pasteurized	41 "
Malted Milk (nothing further stated)	42 "
" with cream or amylaceæ or other foods	4 "
Condensed milk alone	32 "
" " with milk, with cream, with table food or with other proprietary food	6 "
Reed & Carnick's Soluble Food	13 "
Imperial Granum	6 "
Liebig's Food alone	1 case.
" " with milk	1 "
Lactated food; alone 3, with condensed milk	1 "
Nestle's " " 1, " sterilized peptonized milk	1 "

Among other articles mentioned, one case of each: Gardner's food, Robinson's barley, Ridge's food, Brush's food, animal broth, Bartlett's pepsinated food, lactopreparata with malted milk.

In a number of instances the writers simply said "Proprietary foods." In all 214 cases, or 60 per cent., were fed on these foods.

Symptoms. Pain in motion or handling was present in 314 cases, and was felt in different parts in different cases.

Pain when at rest	91	cases.
Interference with motion, true or false paralysis	319	"
Rigidity present in	96	"
Weakness of the back in	97	"
Depression of the sternum	34	"
Swellings in or about joints	165	"
Shafts of limbs involved in	197	"
Gross results—Swellings in soft tissues	97	"
" subperiosteal	114	"
" in both places	16	"
Gums—Unaffected in	16	"
Affected in	313	"
Form of affection—Swelling in	293	"
Sponginess in	249	"
Discoloration in	259	"
Bleeding in	188	"
Ulceration in	91	"
Cutaneous hæmorrhages present in	182	"
Mucus " " "	164	"
Fever (mostly slight) " "	182	"
Anæmia present in	254	"
Blood examinations were made in	15	"

Hemoglobin generally reduced, some only 35 per cent.

Red blood corpuscles also reduced in number.

Rickets was associated in several cases, but the committee express the opinion that it was an accidental association.

Diagnosis. The disease for which infantile scurvy was repeatedly mistaken was rheumatism. The apparent paralytic condition was also a cause of error.

Duration of disease before treatment was commenced varied from one day to two and a half years.

Duration of treatment before marked improvement was noticed, varied from one day to three months. The greatest number of improvements occurred during the first two weeks.

Duration of treatment before recovery was complete varied from one day to nine months. Greatest number occurred during the first four weeks.

Treatment. The results of treatment may be stated as follows:

1st—Cases recovering with drug only (no change in diet)..... 0
2nd—Cases recovering with fruit juice alone (no change in diet) 3
3rd— " " " beef " " " " " " 2
4th— " " " " " and fruit juice combined (no change in diet)..... 6
5th—Cases recovering with change of diet, often including fruit and beef juice with or without drugs..... 25
6th—Cases recovering under change of diet often including beef juice and use of drugs (no fruit juice)..... 20
7th—Cases recovering under change of diet often including beef juice (no fruit juice)..... 38

Conclusions. 1st. That the development of the disease followed in each case the prolonged use of some diet unsuitable to the individual child and that often a change of diet which at first thought would seem to be unsuitable may be followed by prompt recovery.

2nd. That, in spite of this fact regarding individual cases, the combined report of collected cases makes it probable that in these there were certain forms of diet which were particularly prone to be followed by the development of scurvy. First in point of numbers are to be mentioned the proprietary foods.

3rd. In fine, that in general the cases reported seem to indicate that the farther the food is removed in character from the natural food of the child the more likely its use is to be followed by the development of scurvy.

Fatal cases. Twenty-nine deaths occurred in the 379 reported cases. It is difficult to determine in how many of these the scurvy itself could be held responsible for the death; probably in few, if any.

Autopsies. The reports of six were handed in and the following were some of the pathological conditions found in the different cases: Hæmorrhagic spots on the pericardium and surface of the liver; subperiosteal hæmorrhage of the long bones; separation of the lower epiphysis from the shaft of the left femur; sub-pleural hæmorrhages; broncho pneumonia; hæmorrhage into the muscles of the left thigh; swelling about one knee and both ankles; well-marked exudative nephritis; maceration of the lower end of the shaft of the femur; right leg from knee to ankle stuffed with a puffy mass replacing normal tissue; bloody serum in pleural cavity; perforating ulcer of stomach; tubercular (?) process in peritoneum.

Report signed.

J. P. Crozier Griffiths, M.D., Philadelphia,
Chas. G. Jennings, M.D., Detroit,
John Lovett Morse, M.D., Boston,
} Committee.

Minority Report.

(1) From a study of this report and from due consideration of other known facts, scurvy appears to be a chronic ptomain poisoning due to absorption of toxins.

(2) It follows the prolonged use of improper food, and abnormal intestinal fermentation is a predisposing factor.

(3) Sterilizing, pasteurizing, in cooking of milk foods is not, *per se*, responsible for the scurvy condition.

(4) Change of food, administration of fruit juice and treatment of any underlying cause is the rational therapeutic procedure in scurvy.

(Signed) AUGUSTUS CAILLE, M.D.

The presentation of this report was followed by an animated discussion, *first* on the wisdom of publishing the *conclusions*, and *secondly* on the effect of sterilization and pasteurization of milk in producing scurvy. The report was finally adopted by a vote of 18 to 1.

The report shows that sterilization and pasteurization, especially the former, are not perfectly harmless procedures. But it must be acknowledged that, looked at from the point of view of utilitarianism, "the greatest good to the greatest number," sterilization and pasteurization cannot be discarded at present. They have certainly done more good than harm. In the discussion Dr. Booker pointed out that their use is confined to the months of June, July, August and September, and that they should not be used during the winter months unless the milk supply is suspicious in character—for instance, when we have reason to suspect that the milk supply is infected either by dirt, infectious disease or tuberculosis.

In this opinion the reviewer cordially agrees. W. J. G.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D. Tor. L.R.C.P. Lond.,

Surgeon to St. Michael's Hospital; Physician to House of Providence and Home for Incurables; Assistant Surgeon, Toronto General Hospital; Surgeon to the Emergency Hospital.

Treatment of Deep Urethral Strictures by Internal Urethrotomy.

Dr. Gwilym Davis (*University Medical Magazine*, August), in a paper on this subject, says that the prevailing sentiment of the profession is against the employment of internal urethrotomy for deep strictures of the urethra—that is, for those involving the bulbous and membranous portions—and he cites authorities in support of this statement. He compares internal with external urethrotomy and expresses his belief that the comparative value of the two methods is slightly in favor of the internal method for effecting a cure.

"The ultimate ground," he says, "on which a decision must be reached is the relative dangers of the two procedures. There are two—hæmorrhage and sepsis, with or without urinary infiltration. As regards the former, I have heard of no deaths caused by it in internal urethrotomy, nor have I had any trouble from that source, but I have heard of a death from hæmorrhage after external urethrotomy, and have felt it necessary, not only to most carefully ligate all possible bleeding points, but also to pack the wound snugly and retain the packing in place for several days. The question of urinary fever and sepsis is the real buttress on which the opposition to internal urethrotomy rests. The fear of this is largely a heritage from former practice rather than from recent results. It is practically eliminated by modern antiseptic methods. I am hardly prepared as yet to admit that urinary fever is due solely to an infectious element. Chills sometimes follow too closely on urethral manipulations to exclude other agencies. It is more likely to be due, at least to some extent, to nervous disturbance in addition to sepsis. Urinary infiltration is to be avoided by leaving a catheter in the bladder for three days, at which time the wound will have been so closed

by plastic material as to prevent the urine gaining access to the tissue spaces. Sepsis is prevented by rendering the urine antiseptic, by administering antiseptics, by the mouth as well as using them locally, and by observing a careful technique."—*N. Y. Medical Journal.*

The Urethral Length as Diagnostic of Prostatic Enlargement.

Dr. E. L. Keyes sums up a paper read before the American Association of Genito-urinary Surgeons as follows :—

(1) The urinary distance varies in the adult healthy male from something over six to something under ten inches, but may be honestly averaged at eight inches.

(2) The shorter lengths are found in short individuals having a small penis. A large organ naturally contains a long urethra, and this is most certainly the case if the individual be tall.

(3) The age of the individual seems to cause a very moderate increase in the urethral length, irrespective of disease, or perhaps even of individual size.

(4) In prostatic hypertrophy the urinary distance averages more than eight inches, and is longer in cases of peripheral general hypertrophy than where the enlargement is median, or in cases of bar.

(5) In a doubtful case a consideration of the urinary distance may become an important element of diagnosis.—*Am. Jourl. Med. Science.*

Editorials.

INTERPROVINCIAL RECIPROCITY.

WE are pleased to be able to say that there were many pleasant features in connection with the recent meeting at Quebec, not the least among them being the hospitality shown by the physicians of the city and vicinity. We wish, however, to refer especially to the question of a fixed standard in things pertaining to medical education for the whole Dominion, with machinery to confer a license conveying a right to practise in any or all the provinces.

The most feasible plan seems, by almost common consent now, to be a common standard for our various curricula, and inter-provincial reciprocity. The difficulties in the way seem smaller as we study them more carefully, and the earnest desire shown by prominent physicians in all the provinces is likely to produce good results in the near future. All in attendance at the Quebec meeting appeared to agree as to the desirability of having a common license for the whole Dominion.

THE MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

THROUGH an unfortunate accident certain editorial comments on the meeting of this association for 1898, together with a circular letter from the secretary referring to the same, failed to appear in our July issue. We were never particularly enthusiastic over the meeting, but we had no desire to ignore it.

The meeting was held in Quebec, August 17th, 18th and 19th, and was a fairly good one although the attendance was small. It has been with many a matter of regret that the meetings of recent years have been in many respects disappointing.

Is it not possible to have in this Dominion a Canadian Medical Association which will be a credit to our country? We think it is. We have had some excellent meetings—notably at Montreal, Ottawa, Hamilton and Toronto. Why shouldn't they all be good?

That is not an easy question to answer; but it is generally understood the peripatetic feature has much to do with the poor success that has attended many of our meetings.

Some, looking for a remedy, have suggested that one city should be selected as a permanent place of meeting; and that there should be a committee of management, to some extent, at least, permanent in character. We might put these ideas in definite shape by naming Ottawa as the proposed place of meeting, and recommending a committee of management composed of the president, secretary, treasurer, and nine other members, with a rule that three shall drop out each year, when three others shall be elected to take their place.

THE MEETING OF THE BRITISH MEDICAL ASSOCIATION.

THE meeting of the British Medical Association for 1898 was held in Edinburgh, July 26 to 29, and is said to have been an excellent one in all respects. It is pleasant for us in Canada to notice the many complimentary references to the meeting of last year in Montreal, which were made at various stages of the Edinburgh meeting.

A fairly good Canadian contingent appeared at Edinburgh. Among them were the following: Drs. Cameron, Goldie, Macallum, McIlwraith, Peters, Porter, Primrose, Reeve, and Smith, of Toronto; Drs. Buller, Gardner, Grace, Gunn, Hall, Lachapelle, Macphail, Roddick, Shepherd, Smith, Sterling, and Stewart, of Montreal; Sir James Grant and Dr. Church, of Ottawa; Dr. Harrison, of Selkirk; and Dr. Neu, of London. Dr. Grasett, of Toronto, had gone over and intended to be present at the meeting, but was forced to return much sooner than he expected, on account of the serious illness of his only son (since recovered). There were registered altogether 1914, this number including about sixty-five foreign guests.

The British Medical Journal, August 6, says editorially: "Many circumstances combined to render the Edinburgh meeting, from every point of view, one of the most successful which the Association has ever held. Edinburgh is a great medical centre, and is always regarded with loyal affection by those who have been introduced to the study of medicine within its walls. The great traditions of the Edinburgh Medical School are so well known to the whole medical profession that all were certain that the scientific work of the meeting would be of more than ordinary distinction; while the

beauty of the city itself, and of the surrounding country, not less than the many historical and literary associations of the northern Athens, appeal to the love of nature and of literature for which our profession is still distinguished."

DISPOSAL OF THE SEWAGE OF TORONTO.

DR. CHAS. SHEARD, the Medical Health Officer of Toronto, recently presented to the City Council an able and elaborate report on the disposal of the sewage of the city, ending with the following conclusions:

Firstly—Some form of intercepting or trunk sewer will undoubtedly be required to conduct the sewage to outfall works.

Secondly—The drainage of the greater part of the City of Toronto is generally southward and eastward, and the character of the land in the eastern portion of the city appears to be better suited for sewage treatment than that of the western portion.

Thirdly—Pumping of the sewage either in whole or in part will apparently be required.

Fourthly—Chemical treatment of sewage, while it may produce a clarified effluent, will not accomplish complete purification. Precipitation and filtration of the effluent, or filtration of the sewage in its entirety, by properly constructed filter beds, or broad irrigation, appear to give the best results.

Fifthly—In addition to the original cost of sewage works, including intercepting sewers, additional cost for maintenance will be necessary, which, in the various cities and towns where sewage disposal works are operative, is between thirty and forty cents per capita.

Whether the treatment of the city sewage can be carried to completion in one operation, or whether it should be accomplished by degrees, but still as part of a systematized plan, are questions which are largely controlled by financial and engineering considerations.

THE ONTARIO MEDICAL LIBRARY ASSOCIATION.

IN our last issue we called the attention of the reading portion of the profession to this library which has now been in existence for ten or eleven years. Though first contemplated by a few of our prominent Toronto confreres, it has been a provincial library from the beginning. The Ontario Medical Association, in recognition of its advantage to the profession throughout the prov-

ince, has shown its fraternal interest by voting a substantial bonus each year. Long may it continue to do so ! and be an annual reminder to every one of us that we too may do something to encourage an institution whose only aim is the advancement—not only of the actual members of the association, but also of the individual members of the profession throughout the province. In fact, our provincial brethren are treated in a more liberal manner than are the city members of the association ; while the latter are compelled to subscribe for stock in the association, and pay an annual fee, the former have only to write to the librarian and ask for any book or books on the shelves, all the cost entailed being the charges of boxing and express. In this way any physician in good standing may consult the authorities on any subject at the cost of a trifle. Who among us would not give considerable to have at our service the latest literature upon puzzling cases which turn up every few months? The library, with its four or five thousand complete volumes, and its list of monthly and weekly journals, offers the opportunity which we trust our rural and urban readers will promptly and persistently take advantage of.

There are still a number of physicians, resident in Toronto, who have not joined the association, while others, who have become members, have not given it a very loyal support. A few such as Drs. Graham, Greig, Powell, Hamilton, Wilson, Ross, Machell, and others have done a great deal of work, the magnitude and importance of which are, we fear, not properly understood and appreciated. Let others of us do more in the future to assist them than we have in the past.

THE MEDICAL DEPARTMENT OF THE ARMY IN THE UNITED STATES.

OUR neighbors in the United States were not in any way prepared for the late war waged against Spain. Under such circumstances we need not wonder that grave defects were found in the organization and equipment of the medical department of the army. *The Medical Record* of July 30th contained an editorial which reflected very seriously on the efficiency of this department in the Cuban campaign, and practically accused Surgeon-General Sternberg and his staff of incompetency. It quoted from the New York *Sun* to show that the sick and wounded were in many instances sadly neglected.

Surgeon-General Sternberg and Lieut.-Colonel Senn sent two communications, which were published in the *Record* of August 6th, explaining the enormous difficulties which the department had to contend with, and describing the vigorous efforts which were put forth to overcome them. Dr. Sternberg states that General Shafter's army at Tampa was well supplied with medicines, dressings, etc., for field service, but a large proportion of these were left behind on account of insufficient transportation facilities. The men with their guns and rations were first hurried to the front, while the medical supplies were forwarded more slowly.

We think the department should hardly be blamed for errors in transportation which occurred through no fault of the medical officers. There can be little doubt now that the reports in the *Sun*, and other daily papers, were grossly exaggerated. We believe in this country that Sternberg, Senn and most of their brother officers in the army medical department are thoroughly competent and conscientious, and in the recent war did the best that mortal man could do, under the circumstances, in the way of providing relief for the sick and wounded; and are somewhat surprised that a leading and influential medical journal in their own country should assist the lay press in pressing against them such serious charges.

(Since the above was written articles have appeared in subsequent issues of the *Record* which do full justice to the heads of the Medical Department, and place the blame where (as we have indicated) it properly belongs. The *Record* evidently has no animus in the matter, but is simply anxious "to get at the truth.")

Meetings of Medical Societies.

CANADIAN MEDICAL ASSOCIATION.

THIRTY-FIRST ANNUAL MEETING, HELD AT QUEBEC, AUGUST 17, 18, 19, 1898.

FIRST DAY—AUGUST 17TH.

THE thirty-first annual convocation of the Canadian Medical Association began August 17th, under most auspicious circumstances.

It was in the historic city of Quebec that the association first saw its birth, and it was particularly appropriate that it should again this year revisit the place of its birth, in view of the important matter to be brought before it, viz, interprovincial registration, a subject of great importance to the medical profession in Canada. The meeting thus promised to be an epoch-making one in Canadian medical history.

The city of Quebec is one that, on account of many and varied associations, is always of interest to the traveller, but it is not without its special interest to the medical man. It is sufficiently supplied with hospitals, the Jeffery Hale, the Marine, and the Hotel Dieu, the last being, for Canada, of very ancient date, going back two centuries. Laval University, too, where the meetings were held, was founded, in embryo at least, by Mgr. de Laval, archbishop of Quebec, about the same time, and possesses one of the largest medical schools in Canada, the students being almost entirely of French-Canadian extraction, and the teaching based upon the Parisian model. The university has well-equipped chemical and physical laboratories, and a fair museum. Its glory, however, is its library, which, in some departments, is the best in Canada. It is particularly rich in books bearing upon the early history of Canada, many of the editions being unique and almost priceless.

The meeting was held in the Convocation Hall of Laval University, being called to order at 2.30 p.m. by Dr. Thorburn, of Toronto, in the room of the retiring president, Dr. Moon, who was

unavoidably absent. After addresses of welcome from Alderman Foley, acting-mayor, Drs. C. S. Parke and A. M. Ahern extended to the association a hearty greeting on behalf of the city of Quebec and the University.

Dr. F. N. G. Starr, of Toronto, read the minutes of the last meeting, and Dr. J. M. Beausoleil, of Montreal, was then inducted into the presidential chair.

Owing to the large proportion of the local French-Canadian members present, the somewhat unique feature presented itself of papers being read in French as well as in English.

Dr. Beausoleil, in his presidential address, thanked the association for the great honor it had done him in electing him to the highest position in its gift, an honor that he regarded as conferred upon him, not so much on account of any particular merit of his own, as by way of compliment. He referred to the fact that the association was founded at Quebec in 1867, the year of the Canadian Federation, the object being to promote medical science in Canada and to unite the profession. The first president was Dr., now Sir, Chas. Tupper, recently Premier of Canada. The subject that he dwelt particularly upon was that of the interprovincial registration of physicians. It is deplorable that a physician in one province should not be able to practise his profession in a neighboring one, and, if the association could this year bring about the destruction of this anomaly, it would be a noteworthy year in the annals of the society. It might be that a lawyer in Quebec could not practise in Ontario, inasmuch as the legal profession worked under different codes, but medicine is the same the world over, and the present restrictions should be done away with, so that a degree in medicine from any British or Colonial university should carry with it the right to practise anywhere in the Queen's dominions. As it is now, owing to the provisions of the British North America Act, which confederated the provinces, each province has autonomy in the matter of education. However, there is now a majority in favor of uniting forces and forming a Dominion board. Ontario alone hesitates, as special legislation is necessary in her case. Still, it begins to look as if this difficulty might be overcome. In conclusion, Dr. Beausoleil expressed the hope that he might, even if in a very small degree, have contributed to this very desirable end.

A vote of thanks to the president was moved by Dr. T. G. Roddick and seconded by Dr. Mullin, of Hamilton.

The regular business was now proceeded with, a large number of new members being elected.

The first paper, by A. Rosebrugh, of Toronto, was in his absence read by title, "The Duty of the Medical Profession in the Question of the Treatment of Inebriates," and was referred to a committee consisting of Drs. Adami, Thorburn, and Muir, with instructions to bring in a finding. (Will appear in CANADIAN PRACTITIONER.)

Dr. G. Sterling Ryerson, of Toronto, then read a paper on "Monocular Diplopia," which, he said, deserves more attention, being only very inadequately referred to in the text-books. It is much more common, he thought, than was suspected. The overlapping of images was present in monocular astigmatism. He recognized three classes of cases: (1) Those dependent upon diseases of the refractive media, such as astigmatism, facets on the cornea, opacities in the humors, punctures or dislocations of the lens; (2) those with traumatism about the zonule of Zinn, or disease of the ciliary body and iris; partial persistence of pupillary membrane is not often a cause; (3) disorders of the central nervous system. Dr. Ryerson recorded two cases. In the first, which he regarded as hysterical in character, there was diplopia of the right side, associated with right facial neuralgia, tinnitus aurium, augmentation and reduplication of the sounds heard. There was also hyperopic astigmatism. A course of potassium bromide and valerian relieved but did not cure. The second case was one of injury to the left side of the head, the patient remaining unconscious for several days. There was diplopia of the right eye and blurring of the discs. There was probably some protrusion of the posterior portion of the eye forward.

Dr. D. Marcil then read a paper in French upon "Septic Peritonitis Consecutive to Appendicitis, and its Surgical Treatment." He reviewed the history of operative interference and made the somewhat startling claim that the first operation was done in Paris in 1893. He thought that some patients might be saved by operation even after general peritonitis had set in.

Dr. Smith then showed pathological specimens, among which was a gall-stone removed from a portion of intestine contained in an umbilical hernia; also a melanotic sarcoma from the leg of a horse. The latter in the horse usually occurs along the course of the short saphena vein and oftenest in gray horses.

Dr. Fred. C. Valentine, of New York, next read a paper on "The Genito-urinary Instruments Required by the General Practitioner." He pointed out the great improvement in the treatment of gonorrhœa that has taken place since the days when it was regarded as a skin disease. From Ricard to Neisser is a great step in

the right direction. The general practitioner was deterred from treating cases because of the elaborate armamentarium that was thought necessary, but Dr. Valentine pleaded for more zeal on the part of the general practitioner, as much could be done with simple means. The instruments necessary are a microscope, a centrifuge, an irrigator, syringes, and various sounds and catheters. He described his own irrigator, which consists of a glass reservoir that can be elevated on a wooden frame by a cord and pulley. To this is fastened a rubber tube with a glass nozzle, about which is a metallic saucer. He prefers Beneke's sounds, except in a few cases, when he uses Guyon's modification.

Dr. James Thorburn, of Toronto, then read an interesting paper on "The Physician and Life Insurance." (See page 526.)

SECOND DAY—AUGUST 18th.

Dr. James Bell, of Montreal, read a paper entitled "A Series of Cases of Calculus Obstruction of the Common Bile-duct, Treated by Incision and Removal of the Calculi." He felt safe in saying that in no department of surgery has greater progress been made in recent years than in the treatment of gall-stone disease by operation upon the gall-bladder and ducts. Such operations are now followed by a low death rate comparatively. The first successful cholecystotomy was done by Lawson Tait in 1879, and the first attempt to remove stones from the common duct by crushing was also done by Tait in 1884. Later, Thornton introduced needling. Cholecystotomy is an operation now frequently performed, and generally with the most satisfactory results, and in ordinary cases it is almost devoid of danger. To day, incision of the common duct has replaced the cruder operations of crushing and needling. Dr. Bell then gave an abstract of six cases upon which he had operated. The patients had varied in age from 33 to 61 years. In two there was but a solitary stone, in three there were stones in the gall-bladder as well as in the common duct, in four there was obliteration of the cystic duct and a contracted gall-bladder that contained no bile, in two a large calculus was impacted in the ampulla of the duct within the duodenum, and was removed through an incision in the duodenum. One case ended fatally from pneumonia after the sixth day; another patient was submitted to a second operation 5½ months after the first.

CASE 1. A man, aged 52, had his first attack of biliary colic in 1892, and it was associated with transient jaundice. Other attacks followed in three months, in 1893, in 1894, and in 1895. They became,

then, more frequent, with steadily increasing jaundice, drowsiness, anorexia, and loss of weight. The patient was operated on in January, 1896. The conditions found were adhesions of the colon, duodenum, and omentum to the liver; the gall-bladder was contracted and empty; a calculus was found in the ampulla. This was removed by an incision along the line of the duct and obliquely across the duodenum at its posterior border. Drainage was employed. Recovery was excellent, without complications.

Case 2. A woman, 56 years old, was admitted to the Royal Victoria Hospital, February 16, 1897, presenting pain and tenderness in the episgastrium, with deep jaundice. There was a history of biliary colic for twenty years, and an attack of acute cholecystitis at the end of ten years. There was jaundice; the urine contained bile, and the stools were colorless. At the operation the omentum was adherent to the under surface of the liver. The gall-bladder was contracted, and contained 12 stones, which were removed. No bile was present. A large stone was in the ampulla. As the gall-bladder could not be brought up to the abdominal wound, the cavity was packed around, and a drain was put into the bottom of the cavity. The patient died of pneumonia.

Case 3. A woman, 47 years old, complained of pain in the epigastrium, and jaundice. Her first attack occurred in 1881. Until 1894 she had an attack every two years, each associated with jaundice. The stools were colorless. The gall-bladder was shrunken and empty, and a large stone was in the common duct. This was not readily movable, and was removed by incision. Recovery was uneventful.

Case 4. A woman, 61 years old, first presented symptoms in 1894, after a fall, in which she struck the right side. She had periodic attacks of pain on that side, but no jaundice until 1897. The liver was enlarged; the gall-bladder was shrunken, and contained five stones; the crystic duct was obliterated; the common duct was dilated, and contained a fairly large stone, which was removed by simple incision.

Case 5. A woman, forty-nine years old, came under observation after two months' illness. She suffered from pain in the epigastrium, followed by jaundice. The attacks occurred about twice a week, and the jaundice persisted. The stools were colorless. The duodenum was firmly adherent to a contracted gall-bladder. A large stone was found in the common duct, which was dilated. On May 6th, almost three months after the operation, the patient had another attack of colic, with increase in the jaundice. The abdo-

men was reopened on July 21st; a movable stone was found in the common duct, and removed by longitudinal incision.

CASE 6. A woman, 33 years old, came under observation May 6, 1898, with recurring colic and jaundice. Her first attack had occurred two years previously. Operation was performed on May 12th. The colon and the stomach were adherent to the liver. The gall-bladder was distended and the common duct was much dilated. A stone, impacted in the ampulla, was removed through an incision into the duodenum. The gall-bladder was then aspirated and three ounces of pus, which proved sterile, were removed. Six stones were removed from the gall-bladder and one from the cystic duct. In estimating the value of a surgical procedure the surgeon has to consider (1) the conditions calling for operation and the prognosis under other methods of treatment or under no treatment; (2) the gravity of the operation; and (3) the results that can reasonably be expected. In jaundice due to mechanical obstruction by stones there is but one ground of hope outside of operation, and that is by expulsion of the stone through the natural passages or ulceration into a neighboring viscus. Medicinal treatment is useless. Delay is attended with danger that septic peritonitis or carcinoma may develop. Therefore resort to operation is advisable. The operation is usually not a serious one. The deaths are about one in four, five, or six cases. The dangers are from shock from a prolonged operation; from hæmorrhage, and from peritoneal infection. The operation Dr. Bell usually performs is to make an incision in the abdominal wall from the costal margin over the centre of the rectus muscle to about the umbilicus. Through this the parts may be explored, and then a second incision is made from the upper end of the first one along the costal border toward the xiphoid for an inch or two. The separation of adhesions is generally the most difficult and important part of the operation. It is advisable to control the flow of bile by the thumb, and drainage was advocated.

Dr. C. D. Martin, of Montreal, exhibited a series of forms in use in the Royal Victoria Hospital of Montreal for the accurate record of the particulars of disease for statistical purposes.

Dr. V. P. Gibney, of New York, then read a paper on "The Treatment of Convalescent Club-foot." He remarked that there is no more interesting condition in orthopedics than club-foot and none more difficult to bring to a successful issue, although knowledge of the anatomy and pathology of the part is indispensable to the orthopedist. The reduction of the deformity and the preservation of the induced condition in permanency are two different things, and the

latter is often more difficult than the former. Relapses occur from various reasons. Among them is the failure of the surgeon to effect perfect reposition of the parts, or the corrected position may not be maintained for sufficient length of time. Sometimes the neglect of exercising the atrophic muscles or the use of too complicated boots is responsible. In operating, Dr. Gibney aims at the production of an over-corrected position, but he thought it unwise to maintain this too long. He felt that it is best to endeavor to enlist the intelligent co-operation of the patient and friends, and frankly tell them that the trouble is tedious, and much depended on their effort. The child should be taught to walk properly, as this will correct the tendency to pigeon-toes. After operative procedures the foot should be put up in plaster for from three to six months. If there is obstinate projection of the cuboid, and head of the fifth metatarsal, a cuniform incision should be made in the neck of the os calcis. If the foot still rolled Dr. Gibney advocated supra-malleolar osteotomy, placing the foot in the position of over-correction. He thought that the surgeon should himself supervise the construction of all appliances, and should occasionally see the patient for months. Dr. T. G. Roddick, of Montreal, asked if Dr. Gibney had any method of developing the stunted limb outside of those metioned in the books, massage, etc. Sir Wm. Hingston said that the cases are often very puzzling, *e.g.*, whether to do tenotomy or osteotomy, what tendons to cut, or which to choose, the open or the subcutaneous method. In his experience subluxation is not common, but he asked Dr. Gibney's experience on this point. Dr. Gibney, in reply, said that he did not know of any other methods to improve a stunted limb than massage, selected movements, and properly guided exercise. He advised the employment of an experienced masseur. In his experience subluxation is not common.

A discussion on "The Surgical Treatment of Empyema" was opened by Dr. Elder, of Montreal. He asked: Was any other treatment to be advocated than purely surgical? In his experience children and strong adults in the country sometimes get well spontaneously or upon repeated aspiration. On the whole he thought that the old surgical rule was a good one, that where there is pus the surgeon should cut down and evacuate it. With regard to the operation, resection of one or more ribs is much preferable to simple incision. Only in children is it justifiable to make a simple incision. With regard to the point of incision, he thought that the rules of the text-books could not always be followed, but he advised, when there is a localized pus collection, incision over the centre of

the region and drainage. He recommended also not placing the patient on the sound side, but to draw him somewhat over the edge of the table and operate from below. With regard to the anæsthetic, chloroform or the A.C.E. mixture should be used. As to washing out the cavity, most authorities discountenance this now. In slow, prolonged cases in which an external opening occurs spontaneously, or there is rupture into a bronchus, should one operate? Dr. Elder thought, as a rule, not, and never in tuberculous cases. In cases in which the general health is obviously suffering, a second lower opening should be made, with an attempt at drainage, except in amyloid cases; or Estlander's operation might be tried. Sir William Hingston said that each case is to be treated on its merits, as no two cases are alike. Having been prejudiced for years against the operation of resection, he had been converted to it by experience. He is in the habit of washing out the cavity, using weak carbolic solution or plain boiled water. He thought that pneumonia is generally the result of empyema, rather than the cause, as is usually taught. Dr. Roddick preferred a dependent drain. With regard to washing out the cavity, he held a mediate position. If the pus is very fetid, he always washes out. In those cases that hung fire for months he injected into the cavity weak iodin solution or zinc sulphate, which, by their stimulating action, he thought, hastened a cure. If the pus has broken into the air-passages, he would still operate, and could do a radical operation. He preferred a metal tube to a rubber drain. Dr. Muir thought that ninety-nine per cent. of the cases were tuberculous. He preferred operation always in adults, and made his incision as near the backbone and as high up as possible. He also liked a metal drain, using a piece of flanged gas-pipe for the purpose. Dr. Dickson said that, if he obtained more than twenty ounces of pus on aspiration, he concluded that the case would not be cured by this means alone. He would also wash out in fetid cases.

Dr. W. H. Drummond (of Montreal), the author of the "Habitant," then read an interesting historical paper on the "Pioneers of Medicine in the Province of Quebec."

Dr. Ernest Laplace (Philadelphia) then described an ingenious forceps that he had contrived to replace the Murphy button in the operation of intestinal anastomosis. By its use the gut is held in position and can be readily sutured and the instrument be then removed in halves. He stated that the instrument is simple and possesses none of the disadvantages of the Murphy button, or Senn's plates.

Surg.-Col. Neilson, the medical head of the Canadian Militia Service, then addressed the association, asking for their support and counsel in the reforms that it was proposed to introduce in this service. In consequence of the reorganization of the medical service in the Imperial Army, something of the same kind is needed in the Canadian service, as the present system is antiquated. He had been desired by the Canadian Minister of Militia to bring the matter to the notice of the association.

THIRD DAY—AUGUST 19th.

Dr. T. D. Reed, of Montreal, brought up the subject of the official recognition of the new British Pharmacopœia for the whole of Canada. He pointed out that, owing to there being a different medical and pharmaceutical association in each province, it is difficult to get concerted action on the subject, which is of the greatest importance, and he thought that it would be proper for the Canadian Medical Association to make a pronouncement in the matter. It is important that some date be fixed for the coming into operation of the new book. By arrangement of the Province of Quebec Pharmaceutical Association and the Montreal Medico-Chirurgical Society it has been settled that October 1st should be taken as the date. He learned that in Ontario the new book is also official for the coming college session. He therefore moved, and it was seconded by Dr. Mullin, of Hamilton :

" Be it resolved that the Canadian Medical Association, in annual meeting assembled, recommends that October 1st, 1898, be taken as the date on and after which, in the absence of instructions otherwise, physicians' prescriptions should be compounded with the preparations of the British Pharmacopœia of 1898."

Dr. T. G. Roddick then read a letter from Dr. D. J. Leech, of Manchester, the chairman of the British Committee in the revision of the Pharmacopœia, in which he pointed out that the adoption of the British Pharmacopœia seemed to be an act of grace on the part of the various provinces of the Dominion, while Canada as a unit did not accept it officially. He thought this should be remedied.

The association decided then to appoint a committee consisting of Drs. Blackader, Reed, Small, Marois, Cameron, Starr, and MacCallum, to confer with the Federal Government, with a view to formally legalizing and appointing the British Pharmacopœia for Canada.

Dr. A. de Martigny then read an account of two severe cases of furunculosis that he had treated with Marmorek's antistreptococcic

serum with gratifying results. He used 20 cu. cm., and brought the matter to the attention of his hearers in order that the method might be further tested.

Dr. C. R. Dickson, of Toronto, contributed a paper on "Goitre." He had had opportunity of observing about 300 cases of various forms, and had made use of most of the methods of treatment usually advocated. He pointed out that swelling of the thyroid is the expression of several different pathologic conditions. For exophthalmic goitre he had found the best treatment to be absolute rest in bed, a rigid milk-diet, and the exhibition of calomel. Galvanism of the sympathetic is valuable in some cases. In fibrosis of the thyroid, if the ordinary methods failed, he employed electropuncture. When suppuration resulted, the abscess was to be opened and drained. In cystic cases he inserted an insulated canula, cleared out the contents, and then filled the cyst with saline solution. He then passed in a current of electricity sufficiently strong to destroy the lining membrane, employing pressure and trusting to the subsequent inflammation to obliterate the cavity. If calcification ensues hydrochloric acid can be used to dissolve the lime. Removal is only necessary in malignant cases. Thyroid and thymus extracts he had found useless. In the discussion, Dr. Muir, of Truro, pointed out that exophthalmic goitre is very common in Nova Scotia, occurring chiefly in young females, particularly in blondes. As it occurs in young girls, he thought the pressure of school-work might have something to do with its production. He had not seen much benefit from electricity, but placed some reliance on intestinal antisepsis.

Dr. F. X. de Martigny then read a paper on "Genital Prolapse and its Treatment," contributed by Prof. Delaunay, of Paris, surgeon-in chief to the Hospital Péan.

Dr. W. J. Gibson, of Belleville, detailed an interesting case, in which a bicornute uterus had been mistaken for an ectopic gestation.

Dr. D. Campbell Myers contributed a paper on "Neurasthenia," confining his remarks mainly to spinal irritation and the relation of neurasthenia to insanity. Neurasthenia is a complex disease that will be found in time to be divisible into special groups. Spinal irritation bears a close analogy to hysteria and is clearly not due to an organic lesion of the cord, but to psychic disturbance. Dr. Myers thought that those forms of neurasthenia in which the higher centres and emotions were affected sometimes passed over into insanity. Treatment in the early stages is very important. Special

stress was laid upon the necessity for removing the patient from his surroundings and restricting the approach of friends. The Weir Mitchell treatment he used only in selected cases, but the underlying principles are of great value.

Dr. A. Gandier, of Sherbrooke, read a communication on "Tracheotomy *versus* Intubation in Diphtheria." He pointed out that some cases of diphtheria do not yield to the antitoxin treatment, and those in country practice are very difficult to manage. He emphasized the necessity of vigorous local treatment as well as injections and the use of general supporting treatment. When it is a question of tracheotomy or intubation he prefers the former.

A number of other papers were read by title. The session was conspicuous for the important matters that came before it. Besides the question of the British Pharmacopœia for 1898 the matter of "Interprovincial Registration" of degrees was advanced very materially. Hitherto the possession of a degree in medicine in one province of the Dominion did not confer the right to practise in the others. This is an anomaly that is undesirable, and for years attempts have been made to overcome the difficulty.

Last year all the provinces except Ontario signified their readiness to co-operate, and decided upon a suitable curriculum satisfactory to them. Ontario, however, hung fire. This year, however, representatives from all the provinces except British Columbia met, and have fortunately succeeded in reaching a common ground of agreement. They submitted to the association a scheme of study for the entrance to and the practice of medicine, fixing the minimum requirements and adopting a course of four years of at least eight months each. Twenty-four months of this time must be spent in hospital-work. A central board of examiners for the Dominion is to be appointed by the Medical Councils of the individual provinces to examine all candidates for the Dominion license. This Dominion license will bring with it recognition throughout Great Britain and the other colonies. This finding was signed by all the members of the committee, and is to be sent to the various provincial councils for adoption.

A committee to arrange the details of this scheme was appointed, consisting of Drs. McNeill (P.E.I.), Muir (N.S.), Walker (N.B.), Marsil (Q), Thornton (Ont.), Bayne (N.W.T.), McKechnie (B.C.), and Williams (Ont.) Dr. T. G. Roddick, M.P., was also appointed to bring the scheme before the Federal Government, with a view to obtaining legislative sanction to the new board. This result is very gratifying, as it brings within measurable distance a reform that is

of the utmost importance and benefit to the medical profession in Canada.

The usual complimentary votes of thanks to the officers and the local committee were passed unanimously.

The following officers were elected for the ensuing year :

President—Irving H. Cameron, Toronto. Vice-Presidents—Drs. James Bell, Montreal, Q. ; J. A. Williams, Ingersoll, Ont. ; J. MacLeod, Charlottetown, P.E.I. ; Kirkpatrick, Halifax, N.S. ; L. N. Bourque, Moncton, N.B. ; R. S. Thompson, Deloraine, Man. ; Lindsay, Calgary, N.W.T. ; S. J. Tunstall, Vancouver, B.C. General Secretary—F. N. G. Starr, Toronto. Treasurer—H. B. Small, Ottawa. Local Secretaries—S. R. Jenkins, P.E.I. ; W. G. Putnam, N.S. ; T. D. Walker, N.B. ; Hon. C. Marsil, Que. ; C. R. Dickson, Ont. ; George Clingan, Man. ; Lowe, N.W.T. ; R. E. Walker, B.C.

The publishing committee consists of Drs. A. D. Blackader, John L. Davison, W. A. Young, F. N. G. Starr and H. B. Small.

It was decided that the next meeting-place should be Toronto

The following honorary members were elected : Drs. Eugene Delannay, Masse, Jullien, Foveau de Courmelle, Mesnard, Geupin, Paul Lozé, Glatenay, and Noury, all of France.

This concluded a most pleasant session. Many thanks are due to the local committee, who entertained the members royally. The visitors were taken on a much-enjoyed trip to Grosse Isle on the Government cruiser *Aberdeen*, for the purpose of seeing the Dominion quarantine station. This is under the efficient control of Dr. Montizambert, and is most modern and effective. A drive was also organized to the far-famed falls of Montmorency, and the visitors left Quebec with most pleasant recollections of the quaint old city.

Book Reviews.

A Manual of Obstetrics. By A. F. A. King, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children, Columbia University, Washington, etc. Seventh edition. Lea Brothers & Co., Philadelphia and New York, 1898.

We have no special love for manuals, and have generally preferred to recommend, for the use of students and practitioners, the larger text-books on midwifery; but we are compelled to acknowledge that King's little book is exceedingly good, and has become wonderfully popular with students in the United States, and to a certain extent in Canada. It contains practically all that a student wants for the purposes of examination, and at the same time is useful for general practitioners who wish in a hurried way to consult a *multum in parvo* for cases of emergency. It is well written, well illustrated, and really an admirable book in all respects.

Books received:

Medical Diseases of Infancy and Childhood. By Dawson Williams, M.D., Physician to the East London Hospital for Children. In one 12mo. volume of 629 pages, with 18 illustrations. Cloth, $2.50. *net.* Lea Brothers & Co, Publishers, Philadelphia and New York,

The Essentials of Histology. By Edward A. Schafer, F.R.S., Professor of Physiology in University College, London. New (5th) edition. Revised and enlarged. Octavo, 350 pages, with 325 illustrations. Cloth, $3 00, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

Diseases of Women: A Manual of Gynæcology. Designed especially for the use of students and general practitioners. By Francis H. Davenport, M.D., Assistant Professor of Gynæcology in the Medical Department of Harvard University, Boston. New (3rd) revised and enlarged edition. In one handsome 12mo. volume of 387 pages, with 155 illustrations. Cloth, $1.75, *net.* Lea Brothers & Co, Philadelphia and New York.

Medical Items.

PROF. WILLIAM H. WELCH has resigned as dean of the Johns Hopkins Medical School.

THE Senate of the United States has recently passed a resolution preventing discrimination against graduates of legally chartered medical colleges in appointments to the medical calls of army, navy, and marine hospital service.

THE Prussian Minister of Finance, Herr Von Miguel, has proposed a plan for taxing professors of medicine who also practise. He thinks that any professor enjoying a practice worth $5,000 per annum should receive no salary.

AN amusing tale is told by a country doctor in England. He had been attending for a considerable period a parson, and according to custom, now fortunately becoming antiquated there, attending him *gratis*. When in due course the parson died, his widow wrote to inquire how much the doctor would allow her for the medicine bottles.

THE GENERAL PRACTITIONER.—Dr. Joseph Price, of Philadelphia, says (*Denver Medical Times*): "The great broadening of our therapeutical resources, and our great advance in both general and special surgery are largely due to our general practitioners. From their ranks came the fathers. They have not indulged in lofty flights, but have stayed down on the ground and followed the plain, simple ways of common-sense."

THE LATE DR. WM. PEPPER.—We learn from *The N. Y. Medical Journal* that the name and fame of Dr. Pepper are to be perpetuated in Philadelphia by the erection of a bronze statue by the Department of Archæology and Palæontology of the University of Pennsylvania. Two provisions of his will have been complied with: his dead body has been cremated; his brain has been given to the Anthropometric Society of which he was a member.

OBITUARY.

DR RICHARD USSHER TOPP.—Dr. R. U. Topp, of Toronto, died September 6th, after a short illness from typhoid fever. He graduated in 1889, and practised in Muskoka until 1894 when he removed to Toronto.

DR. HENRY B. EVANS.—Dr. Evans, of Picton, died suddenly in the office of Dr. Philip, September 9 h. He was born in Brighton, England, 1820, and became M.R.C.S. in 1842. He was in the service of the East India Company for many years. He came to Canada in 1857, and, after practising for a few years in Kingston, removed to Picton, where he was engaged in professional work up to the time of his death.

WILLIAM PEPPER, M.D., LL.D.—America has lost one of her greatest men through the death of Dr. Wm. Pepper, of Philadelphia, which occurred in California, July 28th, 1898 He graduated in arts and medicine in the University of Pennsylvania in 1862 and 1864, respectively. He became lecturer in chemical medicine in his *alma mater* in 1870, and professor of clinical medicine in 1876. He was elected provost of the University of Pennsylvania in 1881 and re nained in that position until 1894. When he retired he presented the university with a gift of $50,000 He occupied many prominent positions in connection with medical organizations, and was honored and respected throughout the whole civilized world. His age was 55, and angina pectoris is said to have been the cause of his sudden death.

THE

CANADIAN PRACTITIONER

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PUBLISHERS:
THE PRACTITIONER PUBLISHING COMPANY,
TORONTO.

VOL. XXIII.] OCTOBER, 1898. [No. 10.

Original Communications.

THE AFTER EFFECTS OF SURGICAL PROCEDURE ON THE GENERATIVE ORGANS OF FEMALES FOR THE RELIEF OF INSANITY.*

BY DR. JAMES RUSSELL,
Medical Superintendent of the Asylum for the Insane, Hamilton, Ontario.

In the domain of psychology no branch of the subject has occupied greater attention in recent years than the inter-relation between mental and physical phenomena. No general law has yet been formulated which conclusively proves the exact relation of mind to matter. From the days of Plato to Descartes, and from Descartes to Spencer, all sorts of speculative theories have been advanced, but no rational basis or theory has been established which explains this mysterious alliance.

* Read at the meeting of the British Medical Association, held in Montreal, August 31st, 1897.

The subject of this paper brings us more within the realm of Physiological Psychology, or the science which investigates the correlations that exist between functional activity of the various organs of the body and the phenomena of mind. Some hold that mind is a distinct entity entirely independent of matter. Others contend that the brain secretes thought as the liver secretes bile and that mind can only express itself through the operation of living brain matter. As psychologists we are pretty generally agreed that the perfect ego is the sum of the combined functional activity of every organ in the body at its best estate, and that any departure therefrom, or loss of function in any organ either by disease or surgical extirpation, must impair the ego in direct ratio to the status of that organ in the human economy.

That the brain is the organ of mind and through its nerve distribution presides over and regulates the whole process of nutrition secretion, excretion and reproduction is a well attested physiological fact. Its anatomico-physiological mechanism is duplex, so that in case of injury or destruction of function on one side, the other side takes on compensatory action. In the case of dual organs, such as the lungs, kidneys and ovaries, if one is diseased or removed the other takes on compensatory action and the physiological process though impaired, goes on. In the case of the ductless glands, which were so long considered as functionless, recent investigation has proven that each one has a distinctive function of its own which is essential to the vital economy. In short, experience proves that, while nature has richly provided for compensation in duplex organs where one is diseased, the removal of both destroys a function which is essential to the integrity of the whole organism. Nature indulges in no superfluities either of structure or function, but, while she possesses ample power of repair in case of disease or partial loss of structure, yet when total destruction of organic function takes place no other organ can assume vicarious substitution to repair the loss, and the whole ego must suffer.

These preliminary remarks on the general law which govern the relation of the mental to the physical prepares the way for the discussion of the subject of my paper, viz.: "The after effects of surgical procedure upon the generative organs of women for the relief of insanity."

The relation of gynæcology to psychiatry has been pretty thoroughly discussed in late years, and the general concensus of opinion gathered from alienists and neurologists alike is that, while it has a place among the insane just as it has among

the sane, for the relief of physical distress, yet to extol it as a great curative method in the treatment of insanity is nothing short of absurdity. There can be little doubt that the extravagant claims made by its enthusiastic advocates have done much to discredit the practice among sober-minded conservative thinkers.

It is the general opinion among the laity, and that opinion is prevalent among the medical profession as well,that pelvic disorders are the chief cause of insanity among women. In fact, diseases and disorders of the generative organs in women occupy far too prominent a place in the mind of both the laity and profession as causative agents in the production of both mental and physical disease. From pubescence to the climacteric and even to old age nearly all the ills that women are subject to are attributed in some way or other to diseases or disorders of the generative tract. Prior to the dawn of aseptic surgery, the uterus was mercilessly treated to all sorts of local applications, including dilatation, curettement, cauterization, douches, and the application of pessaries of all shapes and sizes. Since the introduction of asepsis the abdominal cavity has become the happy hunting ground of the surgeon, and the very impunity with which it may be eviscerated or mutilated is a strong incentive to the specialist in search of surgical glorification to ply his art. The danger of all specialism is to warp the judgment and contract the mental horizon within the range of its own narrow field of operation. The ophthalmologist versed in the science of optics sees in every leparture from health errors in refraction and by various tenotomies professes to cure epilepsy, locomotor ataxia and other neuroses.

The specialist in Psychology sees in every criminal a lunatic and would treat them all as irresponsible beings instead of punishing them with the rigors of the law. He would abolish capital punishment as a crime and treat the murderer as a subject for commiseration and humane treatment in an asylum. In the vaunting ambitions of kings and emperors and others high in authority, he sees only evidence of mental degeneration and would have them deposed and confined for treatment. All the vagaries of mankind, moral and social, he treats as evidence of mental alienation, and in even his nearest and dearest friend he notices some mental obliquity for which he is irresponsible.

The specialist in surgical gynaecology believes that insanity in women is largely if not altogether due to pelvic disorders, and he proceeds to restore to reason the unhappy victim by unsheathing his scalpel and removing the offending organ. He never fails in his

diagnosis, for he always finds exactly what he searches for, and if he finds no gross there are at least microscopic lesions to justify the operation. He wages his most relentless surgical fury on the ovaries, for in them he believes reside the chief demoniacal spirits that torture the unhappy lunatic. Other spirits dwell in the uterus and he proceeds to the operation of hysterectomy, ventral fixation and trachelorrhaphy, etc. He calls up other minor spirits from the vasty deep of the abdominal cavity in the form of cystoceles, rectoceles, fibroids and polypi, all of which are removed. Following down the genital tract he performs clitoridectomy and perineorrhaphy, and the last citadel he storms is the rectum for the removal of hemorrhoids. He is a strong believer in the theory of reflex nervous irritation, but all his abnormal reflexes centre in the reproductive organs.

I have nothing but words of praise for the splendid achievements of surgical science in the field of laparotomy, and the relief of physical distress and the prolongation of life, which has resulted from the use of the knife. It is against the wholesale surgical mutilation of helpless lunatics that I raise my voice and the exaggerated claims that are made for it as a remedy for insanity. I am free to admit that there may exist pathological conditions in the pelvic organs of lunatics which tend to intensify the mental disorder, and in that case the lunatic has the same right as the sane person to surgical aid for its relief. It may be said that the operation is never performed without the consent of the friends, provided they have any, but we all know how indifferent the friends often are and how eagerly they grasp at any nostrum or operation which has a hope of relieving the poor unfortunates of their malady or relieving them of existence, which to the friends often means the removal of a burden.

Common sense, as well as statistics, prove that sexual disorders in women cannot be such a prolific cause of mental disease as the psycho-surgical gynecologist would make us believe. Statistics prove that the ratio of insanity between men and women is about equal; if there is a difference, there are more male than female lunatics. Why is it that men do not enjoy greater immunity from insanity than women? His genital organs are not subject to the same disorders as women! Happy, thrice happy, should man be because of the simplicity of his genital outfit and its meagre attraction for the operation of surgical science. Had nature decreed him to wear his genitals within the abdominal cavity, he, too, might have been compelled to suffer surgical martyrdom for the sake of restoring his reason.

If the testicle in man is the analogue of the ovary in woman why should the latter be such a constant and persistent offender in provoking mental disturbance, while the former is comparatively harmless, and why is there not greater disproportion between the sexes in the ratio of insanity?

The erotic tendencies in both sexes have their origin in central brain causes, and all attempts at cutting off branches or treating symptoms to cure the evil will be futile; the axe must be laid at the root of the tree or not at all. The whole blunder lies in mistaking symptoms for causes and vice versa.

In a large proportion of women, especially those who have borne children, it is common to find a variety of lesion, abnormality or displacement in the generative organs, often the result of accident in childbirth, from which they suffer little or no discomfort, and are likely to pass on through life in blissful ignorance of anything wrong, unless they have the misfortune to fall into the hands of some meddlesome gynecologist who magnifies the danger and usually recommends surgical treatment or some mechanical appliance. I am convinced there are too many charlatans in our profession who educate and develop in women a morbid apprehension of the dangers to which their health is subject through trifling disorders of the generative organs. The mind of the laity is surcharged with this idea, wholly out of proportion to normal discretion and necessary anxiety. Is it any wonder when women become insane that delusions in regard to their sexual organs are so common? Whatever the mind is most strongly focussed upon in mental health is apt to become the predominant subject of delusion in mental alienation.

It is high time for the profession to call a halt in its mad career of pelvic mutilation in order to extol the triumphs of surgery and build up a reputation for surgical skill by imposing on the ignorance and credulity of the public. While we strongly condemn flagrant surgical abuses practised upon sane women who are capable of appreciating all the risks to life incident to such operations, what shall we say of the practice upon those who are incapable of such appreciation? Is it anything short of criminal to impose such a risk upon an irresponsible being, in the enjoyment of average physical health, for the purpose of relieving a mental condition which is entirely problematical and experimental at best.

I am aware that the most flattering statistics can be furnished of successful results, but in order to appraise these results at their proper value all the circumstances and conditions must be con-

sidered. The specialist goes very methodically about his work, for he knows that, unless he can show at least temporary good results, his work will be discredited and his name and fame will suffer. The results are usually published and widely distributed before they get cold, so to speak, and the unwary are apt to be misled by the success with which they are heralded. I consider all such statistics which are published prior to a two years' test of their efficacy comparatively worthless. All who have had experience in the treatment of the insane know that a sudden shock to the system, a change of environment, or an acute attack of some intercurrent disease, will often break up the insane habit in chronic cases, at least temporarily. We have all seen cases of acute mania recover after an attack of erysipelas of the head, or after a carbuncle on the back of the neck. In cases of acute mania, due to a hyperemic condition of the brain, the recovery may be explained on the rational ground of local counter-irritation. In the surgery of the pelvic cavity for the cure of insanity the patient is placed under the best possible hygienic and clinical conditions, and if no operation at all were performed the results in many cases would be at least temporarily good, and it would have the great advantage over operative procedure in that there would be no risk to life. If all our asylums were equipped with a sufficient staff of trained nurses to enable us to treat all our patients on this principle, I am satisfied the percentage of recoveries would be largely increased, and, while we denounce the Psychoygnæcologist in unmeasured terms for his presumptuous and unscientific pretensions to restore brain function by way of the pelvic cavity, yet we are willing to credit him with having impressed us more strongly than ever with the necessity of special and individualized care in the treatment of the insane.

The following clinical records are taken from the case-book notes of three cases at present in the Hamilton asylum, which fairly illustrate the after effects of surgical interference for the relief of insanity.

E. M. P., age at admission twenty-eight, single, school teacher, born in the United States, well educated, had enjoyed good health up to a few months before admission to the asylum. Her father's sister was insane and confined in Toronto asylum for twenty years. While teaching school she became morose and irritable and had to retire from the profession.

An eminent Canadian surgeon was consulted, who recommended the removal of both ovaries in the hope of relieving the nervous

symptoms, which were considered due to reflex influence. No improvement followed, and a few months afterwards she was removed to Hamilton asylum.

The family physician, in making application for her admission, stated that the exciting cause of her insanity was uterine and ovarian trouble, disappointment at the result of the operation, etc. She was admitted to the asylum June 2nd, 1891, and was at the time of her admission dull and listless mentally and very frail physically. Her mother, who accompanied her, stated that the operation instead of relieving her insanity had left her frailer in body and quite unimproved mentally. She has now been six years in the asylum, and her history since admission has been one of gradual mental degeneration. At times she is mentally excited and tears her clothing and breaks windows. When this subsidess he again relapses into a condition of quiet imbecility, from which there is no hope of recovery.

A. M., admitted to asylum April 1st, 1895, age at admission 22, single, born in Canada, was a bright girl at school. Her general health was good except that she occasionally had attacks of hysteria, followed by what was called nervous prostration. She became quite violent at times and was evidently suffering from acute mania. During one of the attacks a gynæcologist made the diagnosis of inflammation of the ovaries and an operation for their removal was suggested. The parents consented in the hope that her insanity might be cured and their only daughter spared the necessity of going to the asylum. The operation was performed at the patient's home and the assurance was given by the surgeon that both ovaries were extensively diseased, and were consequently removed. The patient made a good recovery, but the after effects were very disappointing. Instead of improving mentally she became violent and unbecoming in her actions and speech. She would sit for hours at a time with her eyes closed and refuse to speak. Her mental condition gradually grew worse and she was admitted to the Hamilton asylum nine months after the first symptoms of insanity appeared and three months after the operation. She has now been two and a half years under observation; when first admitted she was in fairly good bodily health, but very excited mentally and hard to manage, refused to eat and had to be fed with a stomach-tube for six weeks. She gradually degenerated into a condition of quiet dementia. Her friends, mistaking this for recovery, insisted on taking her home on probation December 4th, 1896; she was returned to the asylum January 2nd, 1897, having been home one month

and twenty-two days, her friends reporting that she was quite unmanageable while at home.

During her asylum residence she has given no evidence to justify the hope that she will ever recover, and, though she gave early promise of a bright and useful life, she is now doomed to spend the remainder of her days in an asylum with terminal dementia to wind up the scene.

M. C., admitted to the Hamilton asylum December 2nd, 1895, age 20, single, Canadian, a farmer's daughter, habits of life have always been good, had a good common school education. Her physical condition on admission was fairly good, but her mental stupor was most pronounced, did not know her own name. Her mental condition was bright up to the age of eighteen, when she became dull and stupid and had marked delusions of persecution and was a confirmed masturbator. Her father's brother was insane and confined in Toronto asylum. Her life at home had been the quiet, uneventful one incident to the farm.

A surgeon in an adjoining town advised the removal of the ovaries for the relief of masturbation and dysmennorhœa, with the promise that it would also relieve the mental condition. The confiding parents consented to the operation, but instead of proving beneficial her mental symptoms became more pronounced, and in a melancholy mood she wandered from home and lived in the woods for several days. After this she was brought to the asylum and her life since admission has been that of a quiet but hopeless dement. This young woman without her ovaries and minus her clitoris, which the enthusiastic spayer could not leave, is to all appearance doomed to a life hopeless of recovery. Her face still bears evidence of a bright, happy and intelligent youth, but now marred and saddened by a gloomy outlook of despair.

It is to be noted that all these cases were young, intelligent, well-educated and of good mental inheritance. Under ordinary circumstances they were cases that should recover. The after effects of the operation are very much the same in each case, the acute symptoms abated, followed by a condition of mental stupor, with progressive imbecility.

Their whole appearance and symptoms impress one that they are suffering from a common cause. They are alike dull, listless and unimpressionable and might be classified as of the non-ovarian type; there is no mistaking these cases and the practised eye can at once distinguish them without being told.

OPINIONS OF VARIOUS ALIENISTS.

In order to secure something like a concensus of opinion in regard to the relation of gynæcology to psychiatry I submitted a list of questions to one hundred and twenty of the principal alienists in America with the following result :

Question 1.—What percentage of female cases admitted to your institution is due to disease of the genital organs ?

Answers.—With the exception of three superintendents, the percentage is said by all to be less than five, and several assert that in not more than two per cent. could disease of the uterus or its appendages be considered a factor in the causation of insanity.

Question 2.—Have you any experience of surgical procedure for the relief of this condition as a curative agent in insanity, and what are the results ?

Answers.—The large majority of those having had any experience do not claim that any permanent benefit has resulted from operation as a curative agent. In some cases there was temporary arrest of insanity, but this was followed in nearly every instance by a recurrence of the nervous phenomena, so that the mental condition of patient was unimproved.

Question 3.—In what proportion of cases operated upon could recovery be attributed to the operation ?

Answers.—Only six assert that recovery could be attributed to the operation. Several claim that the mental condition was made worse.

Question 4.—Do you advocate surgical interference in these cases for the relief of insanity?

Answers.—In nearly every instance the gist of the replies to this inquiry is that surgical interference should be resorted to with the insane as with the sane, only where there is evident physical indication for operation, but seldom or never as an experimental procedure for the relief of insanity.

Question 5.—In cases where temporary or permanent relief is secured, what proportion of the success is due in your judgment to extra nursing and special individual attention ?

Answers.—The answers to this inquiry indicate that the opinion is almost unanimous that more is due to the special nursing, rest, etc., than to the operation.

Dr. P. M. Wise, Chairman of the State Commission in Lunacy for the State of New York, concludes his answers to my inquiries in these words : "In general I may say that I do not believe that

gynæcology has added to the recovery ratio, except in a very slight degree."

Dr. Charles W. Page, Superintendent of Danvers, Massachusetts, Lunatic Hospital, says : "We have a resident gynæcologist, who makes a special examination of each woman admitted, and yet we fail to find in a total yearly admission of 225 women more than a fraction of 1 per cent. in which surgical interference was justifiable."

Dr. C. P. Bancroft, Concord, N.H., says: "A few cases have come to my notice, but the results were entirely negative."

Dr. H. M. Quinby, Superintendent, Worcester, Mass., Lunatic Hospital, says : " Investigations made in this hospital lead me to the opinion that, of our female patients, there are only exceedingly few whose insanity can be attributed to disease of the genital organs."

Dr. B. F. Sanborn, Superintendent, Maine Insane Hospital, says : " I think that successful results obtained are dependent very largely upon careful nursing and special individual attention."

Dr. F. C. Hoyt, Superintendent of Iowa Hospital for the Insane, says: " Our operations have only been such as were demanded by the physical condition of the patient and were never made on theoretical grounds for the relief of insanity. In my opinion the benefit is derived from the extra and individual care and nursing, rather than the operation itself. I have found that patients are almost invariably better mentally after a severe illness or injury, and attribute it to the above reasons. However, these patients usually resume their former mental condition in a short time."

Dr. William Noyes, Boston, Mass., Insane Hospital, says: " I do not know of any case of insanity due to the disease of the genital organs."

Dr. H. A. Gilman, Superintendent of the Iowa Hospital for Insane at Mount Pleasant, says : " We have operated in a number of cases where the disorder seemed to be attributed to the pelvic organs, and have brought on menopause, but without any apparent good result. The patients have been about as much disordered thereafter as they were before the operation."

Dr. Arthur F. Kilborne, Medical Superintendent State Hospital, Rochester, Minnesota, says : " We would have it understood that we operate for the relief of diseased organs, and not for insanity We do not consider that uterine disease holds any more important place than diseases of any other organ of the body."

Dr. F. W. Drewry, Superintendent Central State Hospital, Petersburg, Virginia, says : " More of the success claimed is due to the special nursing than to the operation itself. "

Dr. J. T. Seavey, Superintendent, Tuscaloosa, Alabama, in regard to surgical interference for the relief of insanity, replies : "Only when there is some evident indication for it, with generally very unfavorable prognosis."

Dr. Charles G. Hill, Medical Superintendent Mt. Hope Retreat, Baltimore, Md., says : " The majority of the females who come to us here have been treated or operated upon without avail. There are at present several in this asylum who became insane after laparotomies."

Dr. George H. Rohe, Sykesville, Md., says : " In between 30 and 35 per cent. of all cases I operated upon mental recovery followed. I advocate surgical interference whenever indicated by the local disease. The relief of the mental disturbance is perhaps incidental."

Dr. M. Campbell, Superintendent, Knoxville, Tennessee, says : " In my cases treated surgically for relief of disease of the organs of generation the result was that the physical condition was cured and the insanity became markedly worse."

Dr. E. H Howard, Superintendent, Rochester, N.Y., State Hospital, says : "I know of no case where recovery could be attributed directly to an operation."

Dr. Charles G. Wagner, Superintendent, Binghamton, N Y., State Hospital, says : " I have never had much faith in the theory that mental disturbance was especially closely allied to abnormal uterine conditions in women."

Dr. Frederick Peterson, New York, says : " It must be a very rare and exceptional case in which I should advise such treatment."

Dr. W. W. Godding, Superintendent, Government Hospital for Insane, Washington, D.C., says : " The results are always questionable."

Dr. C. H. Hughes, of St. Louis, says : " I have known both ovaries removed and insanity to continue in several instances and insanity to result from oophorectomy where no mental disease had previously existed. In some instances temporary arrest followed by recurrence of the nervous symptoms was observed after the operation."

Dr. W. A. Gorton, Superintendent, Butler Hospital for Insane, Providence, R.I., says : " Our patients, all coming from the higher rank of society, have passed through the hands of the gynæcologist. neurologist, and every other ologist before we see them."

Dr. H. A. Tomlinson, Superintendent, St. Peter, Minn., State Hospital, says : " Surgical procedure in these cases has always been n effectual and those apparently cured have always relapsed."

Dr. G. H. Hill, Superintendent of the Hospital for Insane, Independence, Iowa, says: "As many, yes more, cases are benefited by vaginal injections given by a trained nurse as by any gynæcological operation."

The opinions of Canadian alienists seem strongly opposed to experimental gynæcological surgery.

Dr. James F. W. Ross, of Toronto, says: "I am very much opposed to the appointment of gynæcologists in connection with insane asylums unless very much restricted in their work by Medical Superintendents. Surgeons supposed to be sane, dealing with sane women, go much too far in dealing surgically with the female sexual organs, and when dealing with insane women they are certainly liable to go much further. I operated on one insane woman only, and did so contrary to my advice. Patient was as bad as ever after operation."

Dr. Daniel Clark, Medical Superintendent Asylum for Insane, Toronto, says: "The mania for removing the ovaries is a crying evil. To unsex a female does harm in a majority of cases. A large number of cases have disease in the great nerve centres which produces abnormality in organs. To expect cure by cutting and carving of such an organ as the uterus and its appendages, when it is evident that the nerve supply is affected, is like to expecting cure of a tree in cutting off a limb when the disease is in the roots or trunk."

Dr. C. K. Clarke, Medical Superintendent Rockwood Hospital for Insane, Kingston, says in regard to gynæcological surgery in mental disease: "There is no room for such a fad. Where uterine disease is suspected a proper examination is invariably made, generally with decided mental harm as a result, to say nothing of negative results as far as uterine troubles are concerned. These examinations, taken in conjunction with very extensive *post-mortem* investigations, convince me that uterine disease is not any more common among the insane than among the sane, and as a factor in the production of mental disease may be considered as trivial and unimportant."

Dr. T. W. Burgess, Superintendent, Protestant Hospital for Insane, Montreal, says: "Four cases sent to hospital for operation; all recovered mentally." "Insane patients should be dealt with the same as those not insane, and, where examination points to the advisability for operation, I would operate in hope of benefiting the mental trouble, failing which the patient's life would be more comfortable."

Dr. S. Vallee, Medical Superintendent, Quebec Lunatic Asylum, says : "The cases we have operated upon show no benefit to the mental trouble."

Dr. G. L. Sinclair, Superintendent Hospital for Insane, Halifax, Nova Scotia, says : "We have no gynæcologist connected with this hospital ; if we did we would certainly have more cases of disease of the female genitals. We endeavor to discover whether such diseases exist and when we find them treat them ; but I am not prone to consider slight derangements affecting those organs in the female any more capable of causing mental disease than would departure from health in the male organs cause insanity in our sex."

Dr. D. Yellowlees, Medical Superintendent Royal Asylum, Glasgow, says : "I have not had great experience in surgical interference in these cases, and think the reckless way in which the ovaries are removed on your side of the Atlantic quite wrong, if the operation be done without any proof of disease in the ovaries. Certainly, if one can trust to testimony from patients, sexual feeling is not destroyed by removal of the ovaries or of the external parts."

Dr. R. C. Stewart, Medical Superintendent County Asylum, Leicester, England, says : "The percentage of female cases admitted to that institution was only about one per cent. We hardly have any serious disease of genital organs. We have had no operation for the last eleven years."

Dr. Charles W. Pilgrim, Medical Superintendent Hudson River State Hospital, Poughkeepsie, N.Y., says : "He handed my questions to Dr. Putnam, the woman physician of that institution. She says the percentage of female cases admitted whose insanity was due to disease of the genital organs was very small, only 42 cases in 3,646 admissions. There was no improvement in the mental condition of four women who were admitted after operation (two pelvic, two abdominal) for the relief and cure of mental disease."

SUPRAPUBIC PROSTATECTOMY.*

A. MacKinnon, M.D.
Guelph.

FOUR years ago I presented a paper to this association advocating resort to this method in dealing with hypertrophy of the prostate. I pointed out the difficulty in the definite diagnosis of intravesical growth of the prostate, showing that no reliance could be placed upon rectal examination. When the enlargement of the prostate extends downwards it is very easily recognized in this way; but when the growth extends into the cavity of the bladder the most careful rectal examination may entirely fail to distinguish it.

The two principal points on which the diagnosis rests are, first, the presence of residual urine in case the patient is yet able to void his urine naturally. After the patient empties the bladder as completely as he can, if the catheter is used it brings away from half an ounce up to four or six ounces or more. Second, the length of catheter required, seldom less than nine inches, often nine and a half or even ten. In some patients the growth acts like a ball valve at the vesical orifice of the urethra. These are wholly dependent on the use of the catheter. In others it is difficult to pass an instrument, great pain and bloody urine following its use. Some patients cannot be taught to use the catheter at all, and others fail to keep it clean.

Though some patients get on fairly well for years, yet, sooner or later, cystitis develops with its suffering and dangers. For the relief of this condition I claim that the operation of suprapubic prostatectomy is a comparatively safe operation, and that it brings to the suffering patient more real relief than any of the other suggested methods.

The reading surgeon will tell me that I am advocating an operation that has a mortality record of forty-two per cent. So far as my own necessarily limited experience entitles me to speak, I must

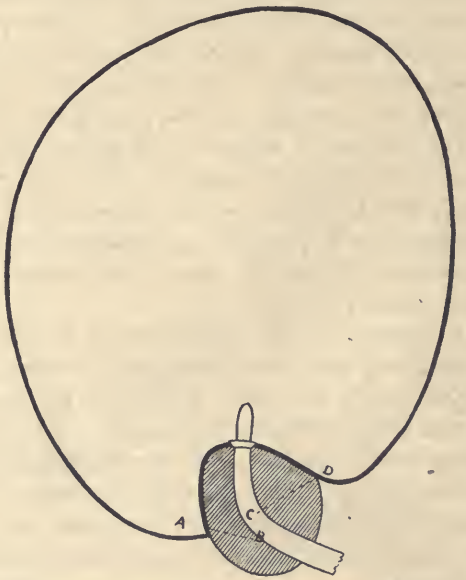
* Read at a meeting of the Ontario Medical Association, 1898.

express my amazement at the published statistics. I cannot believe these figures give anything like a correct idea of the death-rate properly belonging to this operation. I do not doubt that the men who give these figures to the world mean to be fair and impartial. But these records date back to the time when the operation was in its infancy—when it was only performed after failure by the perineal route to remove very large calculi—the operators being chiefly men who did the operation but once. Besides deaths due to advanced kidney disease, deaths due to malignant disease of any portion of the urinary tract were added to the death rate of this operation, in case an attempt had been made by this method to give them some relief. I claim that the operation itself should have no such mortality, if performed by surgeons of even average skill and judgment. When I can produce two men over eighty years of age and one over seventy when operated upon, from each of whom large masses of prostatic growth were removed by this method, who not only survived the operation, but have obtained complete relief from their distressing symptoms, and have regained voluntary control over their bladder functions, being able to dispense wholly with the use of the catheter, I am compelled, either to question the accuracy of the published statistics, or to claim for the old men of my district more than ordinary human endurance.

Possibly on account of the published rate of mortality, the attention of general surgeons has not been given to this operation. To open the bladder above the pubis, in ordinary patients, is one of the simplest and safest operations in surgery ; and once the bladder is opened, the whole cavity can be very readily explored both by the finger and by the eye. If there be a calculus in the pouch behind and below the enlarged prostate, or in a sacculated part of the bladder, it is easily found, and the eye can guide any instrument necessary for its removal.

The prostate itself can now be accurately mapped out ; its form size and degree of hardness can be determined. By examining with the finger of the left hand in the bladder, and the index of the right in the rectum, further information is gained. By passing a large steel sound into the bladder, the relation of the first portion of the urethra to the enlarged prostate can be correctly known. With the knowledge gained in this way, it is easy to determine the method of operation suitable to the case in order to remove completely all of the gland that projects into the cavity of the bladder, and to lower the first portion of the urethra to the proper level so that no pouch shall remain to hold residual urine.

In removing the protruding part of the prostate I have found it necessary to use long curved scissors with blunt points, a dull-pointed knife and several kinds of forceps : but I do most of the work with the point of the finger. I use the scissors to cut deeply the projecting collar into halves—one blade being in the urethra and the other in the pouch behind the prostate. The knife is used to incise the mucous membrane along the whole margin of the growth on both sides. When it is intensely hard, as it often is, strong forceps are used to crush the growth or to steady it for the finger, but never to tear away the gland by force. Beginning at the median cut, the point of the finger is insinuated into the tissue, and by patience and hard work I enucleate, piece by piece, until I get



The mass protruding into the bladder, as shown, should be removed to the dotted lines AB and CD, and the first inch of the urethra greatly dilated, so that the point of the finger may easily enter it.

away the whole of the gland that projects into the bladder or presses upon the urethra. In this way large masses of gland tissue are removed. Having accomplished this much the position and condition of the first portion of the urethra must now receive consideration. The vesical orifice should be made very free, using a dilator if necessary. Its floor must be made as low of the base of the bladder. No bar of tissue is to be left, otherwise the patient will fail to receive the full measure of benefit that he should obtain. Belfield, of Chicago, in a very able paper published several years ago, called

special attention to this matter. He claims that the success of the operation for the patient depends on bringing the floor of the urethra to the level of the base of the bladder, and in difficult cases he advises, if the obstruction cannot be otherwise removed, to make a perineal incision also, so that by the combined method whatever obstruction there may be can be wholly removed.

In the four years since I read the first paper, attention has been called to castration as a simple, safe and effective method of dealing with prostatic hypertrophy. Since the publication of several articles by Dr. White on the effects of castration in reducing enlargement of the prostate, this operation has become quite the fashion, and almost every operator of any note has furnished a few cases. The reports are rather conflicting; but, fairly considered, I think it is established that in some cases such relief followed castration as to justify the use of the word cure. At the annual meeting of the British Medical Association for 1896 the treatment of hypertrophy of the prostate was discussed by David McEwen, Reginald Harrison, Mansell Moullin, Sandberg, John Chicne Southam, Mortan, Jordan Lloyd, Hadden and Cameron. The views expressed were by no means in favor of any one method.

Dr. McEwen, who introduced the discussion, after referring to the high place as a radical operation given to the suprapubic method since it was first brought to the notice of the profession at the annual meeting of the British Medical Association in 1889, by the late Mr. McGill, of Leeds, and after simply mentioning some modifications suggested by Belfield, of Chicago, Nicoll, of Glasgow, and Alexander, of New York, confined his own remarks entirely to double orchidectomy. At the close of his excellent paper, he made a summary of his conclusions, which I take the liberty of quoting:

1. "In a considerable proportion of cases castration induces more or less atrophy of the enlarged prostate."

2. "This atrophy occurs most readily in the soft and elastic form."

3. "The best effects occur when there is enlargement of the whole gland. Sessile enlargement of the median lobe may yield to castration, but intravesical growths are, as a rule, more suited for prostatectomy."

4. "Cystitis when not far advanced may be relieved or cured."

5. "High grades of cystitis, associated with septic inflammation of the kidneys, and with distressing bladder symptoms, will be more benefited by drainage of the bladder."

6. "Vesical contractility may be restored even after years of complete catheterism."

7. "Even if voluntary power fails to return, castration may still bring relief to the patient, if catheterism has been frequent, painful and difficult."

8. "With the exceptions mentioned, castration will give as good results as prostatectomy with a smaller death-rate."

9. "Resection of the vasa deferentia acts more slowly than castration in reducing hypertrophy of the prostate."

10. "It is a simple operation, would be more readily assented to by the patient, and could therefore be recommended earlier."

I frankly admit that I have no personal experience of castration in the treatment of prostatic hypertrophy. A careful perusal of the cases on record shows that melancholia and other forms of mental disturbance have occasionally followed castration. This fact should not be overlooked in deciding upon the method of operative relief.

Against the general adoption of castration as the method of treatment for hypertrophy of the prostate, I wish to point out this objection, which I regard as fatal: In three of the patients I operated on I found stone present, as well as great intravesical growth. The hypertrophy was the primary and principal disease, for which the operation was performed. At least in one of the cases the stone was not detected, though the bladder was carefully and repeatedly examined by the sound. In cases of great growth of the gland into the bladder cavity, stones of considerable size may escape detection by the most skilful examination, because they lie in a pouch which is inaccessible to any instrument.

The objection I urge is this: If the operation is commended generally by surgeons of good standing, soon we will hear of men being castrated for stone in the bladder, for chronic cystitis, and for malignant disease, because it is not always easy or possible to make a positive differential diagnosis between simple hypertrophy of the prostate and some of the conditions which simulate it so closely.

There are other objections. Even McEwen admits that, when there is considerable intravesical growth, prostatectomy is a more suitable operation. These are the very cases that cause urgent symptoms, and demand surgical interfereuce. Growth of the prostate downwards upon the rectum may become very large and yet cause no bladder symptoms during life. In my view, when he makes this admission about intravesical growths, and also the admission that severe or septic cystitis is better treated by drainage, he leaves few cases for castration. Besides, amongst my patients I find men more willing, even at the age of eighty, to undergo prostatectomy than to be castrated.

Regarding castration Prof. Chiene, in the discussion previously referred to, expressed himself as strongly "opposed to the removal of the testicles for prostatic hypertrophy, and would rather recommend prostatectomy in cases calling for surgical interference." I venture to predict that in the near future surgical practice will follow this view, and abandon castration as an unsurgical operation.

In *The Brit. Med. Journal*, July, 1894, Mayo. Robson reports twelve cases of McGill's operation with one death. The ages are given 67, 63, 62, 66, 73, 61, 61, 64, 72, 73, 62, 73. The operator thought the one death was due to some injury of the rectum by the use of the rectal bag. But, even if the death were unavoidable, the mortality is only about 8 per cent., and not 20 to 40 per cent., as generally stated.

In my first paper I reported two cases, ages 64, 82. At the close of this paper I shall give notes of three others, ages 81, 65, and 73. I have, so far, no death to record.

In November, 1895, in the report of the Clinical Society of London, Mansell Moullin mentions two cases over 60 years of age. In one he found eighteen separate small-sized calculi, in the pouch behind the enlarged prostate; in the other he found one as large as a penny. He says: "For these patients lithotrity or lithotomy would be only a temporary expedient." In one of my earlier cases I removed twelve stones by the lateral operation. After the wound healed the patient's bladder symptoms returned. Three months afterward I performed suprapubic prostatectomy—removing a large mass of gland structure about the vesical orifice of the bladder. This man has been restored to health, being now able to void urine naturally without pain or undue frequency.

This certainly goes to show that the suprapubic method of performing lithotomy has the advantage over the lateral or any form of perineal operation. It permits the operator, after he has removed the calculi, to explore the condition of the bladder. Should there be hypertrophy or any other condition requiring operation he could then proceed to do all that was necessary instead of subjecting the patient to a second operation. I present before you almost the whole of the tissue removed from my last case. It serves to give some idea of the amount of gland structure that may require to be removed.

In closing my paper, permit me to say that I am strongly in favor of suprapubic prostatectomy as the method for general adoption in dealing with hypertrophy of the prostate. I look upon it as a safe operation, if performed with fair skill, and it is much more

likely to cure the patient than any other of the suggested methods. I cannot imagine any case that I would treat by castration.

The results obtained in the five operations are: No deaths; four of the five patients may be called "cured"; one is not cured, though benefited by the operation.

CASE 3. D. S., age 80 years: The bladder trouble has been going on for several years. At times the use of the catheter was necessary, not constantly. Except when controlled by opiate suppositories, the frequency was two or three times an hour, accompanied by very severe spasms.

Residual urine: Four to six ounces sometimes, containing blood, and always more or less ropy mucus and pus.

Length of catheter, nearly ten inches.

Rectal examination did not show appreciable enlargement of the prostate, nor did the sound show the presence of stone.

On opening the bladder three small stones were found in a pouch at the base of the bladder, and a large, hard, smooth collar-like growth around the vesical orifice of the urethra, which extended about an inch and a half into the bladder cavity.

The hemorrhage during the operation was profuse, but ceased spontaneously within twelve hours.

Recovery was uneventful, the wound being firmly closed in five weeks.

The patient has regained full control, the use of the catheter not being required.

The frequency is reduced to once in three or four hours by day, and once in five or six by night, without pain. The operation was performed in January, 1897.

CASE 4. J. D., age 65. Operation, May, 1897.

The bladder symptoms began about two years ago, but much worse recently. Before operation the frequency was once an hour, sometimes every half hour, with acute burning pain.

Length of catheter, nine and three-quarter inches.

Residual urine: One ounce to an ounce and a half.

Urine: Sometimes acid, sometimes alkaline, with slight deposit containing pus cells. Spe. Grav., 1010; a trace of albumen.

Daily quantity from fifty to sixty ounces.

A year after operation: The patient is much improved, having gained about twenty pounds. Less frequency and less pain, but the man cannot be said to be cured. The urine still shows a trace of pus. Being acid, it probably comes from some degree of pyelitis,

or possibly a stone in either kidney. The case is still under observation.

CASE 5. P. D., age 73. Wholly dependent on the catheter for ten years; urine alkaline, 1020; 10-15 per cent. albumen; length of catheter, 9¾ inches; had hemorrhage usually after exertion; no stone detected. Operation, February, 1898.

On opening the bladder, three large hard calculi were found in the pouch below the enlarged prostate. The same condition of the prostate as in the two other cases, only that it extended further into the bladder cavity. At the base of the bladder a small opening, large enough to admit the point of a finger, was first noticed when the operation was nearly completed. On raising the base of the bladder by a finger in the rectum this opening was found to lead into a sac about an inch and a quarter in diameter.

In this case also the hemorrhage was severe, but ceased spontaneously without any marked ill effect on the patient.

The only untoward event in this patient's recovery was due to the slow closing of the wound. At the end of twelve weeks it still allows a little leakage. His bladder now retains six or seven ounces of urine at a time. He has no pain, and can void the urine without the catheter.

In the past four years this subject has been discussed from various standpoints, and by writers in all parts of the world. Those interested may refer to the following articles and monograms :

British Med. Journal, July 14th, 1894; November 16th, 1895; December 28th, 1895; October 10th, 1896, and February 20th, 1897.

American Journal of Med. Science, 1895, 1st vol., page 465; 1895, 2nd vol., pages 233 and 350; 1896, 1st vol., page 487; 1897, 1st vol., page 115; 1897, 2nd vol., page 601.

Annals of Surgery, September, 1896.

Medical Record, December, 1896.

University Med. Magazine, April, 1897.

Gould's Year Book, 1898.

Treatment and Cure of Enlargement of the Prostate, by Mansell Moullin, issued in 1894.

Selected Articles

THE STETHOSCOPIC AUSCULTATION OF PERCUSSION.

(CONSIDERATIONS UPON THE TECHNIQUE OF THIS METHOD APPLIED TO THE STOMACH.)

By DR. P. VILLARI.

(Continued from September Number.)

The stethoscopic auscultation of percussion finds its proper application on the stomach. This viscus is the only organ that lends itself fully to auscultated percussion, its limits being thus clearly outlined. Federici, Bonfigli and Cantani, considering that the stomach can almost always exercise a notable influence upon acoustic phenomena, had previously contrived methods for its delimitation. Federici, observing that the stomach can give a metallic character to the cardiac sounds, and by means of the resonance markedly increase them so as to render them audible at a distance, taught his method, consisting of auscultation of the heart sounds over the gastric walls, chiefly over the lower left fourth. Cantani in his turn proposed to auscultate the bladder sounds over the gastric walls. These two methods are in reality only a stethoscopic auscultation of percussion, except that in them the sonorous vibrations, transmitted to the stomach, are called forth, not by a blow given externally, but by vibrations arising from the sound phenomena of the cardiac beats and from the bladder murmur, and also from the movement of the heart upon the upper wall of the stomach, through the diaphragm.

The stomach is an organ which, however empty it may be, contains always a given quantity of gas; and it is just by reason of this quantity of gas, and by reason of its position and the special form and character of its walls, that it gives a special sound, which we call tympanic. This quality of sound, given by the stomach, and the extension of the area of sonorousness, varies much according

to the quantity of gas contained, and varies also according to the tension and thickness of the walls. It is for this reason that we can obtain by ordinary percussion the various modifications of the tympanic sound, low tympanic, high tympanic, metallic-tympanic, and metallic. It is thus very difficult in some cases, especially when the stomach contains little and the colon much gas, to fix the line of the greater curvature of the stomach by simple percussion, since the colon can acquire such a resonance as to be in unison with that of the stomach. In these cases, then, if it is difficult for the ear, even when experienced, to differentiate by ordinary percussion the sound of the colon from that of the stomach, it is not so for the ear, when in close relation with the stomach by means of the stethoscope. The ear will thus appreciate distinctly the pitch of the stomach note, and will distinguish it from the pitch of the colon note and that of the surrounding viscera.

(Here follows a description of a small hammer made for the purpose of percussing the stomach.)

With the hammer which I have described we attain the object which Bianchi proposed, namely, to percuss rhythmically, and with equal force.

Wishing to have a positive proof of the limits of the stomach, obtained by percussing with my pleximeter hammer upon the gastric wall and auscultating, I have experimented on the cadavers. Using a binaural stethoscope, to enjoy complete liberty of eyes and hands, I marked a series of points on the abdominal wall of a cadaver. These points showed where the characteristic stomach sound disappeared. Bianchi in his work advises placing the stethoscope 3 c.m. under the xiphoid appendix and then percussing over the gastric area in lines from the centre to the periphery. Heeding the warning of Bianchi, I have been able to mark the different points on the abdomen. I have also tried to prove the contrary by percussing below the xiphoid appendix, placing the stethoscope at different points. I have obtained the same results, with some slight difference along the left border. I have also experimented by percussing and applying the stethoscope at different points. I have obtained nearly always the same boundaries. I have put in pins at the points marked, and then opened the abdomen. The boundaries of the stomach were found to be very exact. (The abdomen of the cadaver was opened in the presence of Professors Petteruti and Guarino.) From other experiments made on the cadavers, I have been always able to get exact results and to convince myself of the reliability of the method. Besides these ex-

periments, those upon the sick have proven the sureness of the method, since there have been found variations of the boundaries, in the same individuals when standing, according as the stomach was empty or contained liquids, artificially ingested, after the first delimitation. Likewise, the individual being stretched out at full length, there have been found variations in the boundaries, according as the stomach was empty or filled with gas from the introduction of seltzer water or effervescent powders.

We can thus formulate the following conclusions: (1) The stethoscopic ausculation of percussion gives good results only for the delimitation of the gastric area, and for such purpose it receives the place of honor among diagnostic methods devised for that end. By means of this method even the anomalies of form and position of the stomach can often be fixed.

(2) In contrast with the other organs, it can be studied and applied to the stomach with little exercise or practice. It must be remembered, however, that the sounds from the dilated colon and intestines are transmitted to the stomach and are heard very clearly through the stethoscope, placed exactly over the stomach region. But these sounds, which come from the other viscera, are not accompanied by the characteristic metallic pitch which marks the sounds that are heard when the percussion falls on the gastric area.

(3) This metallic tone is perceived with the same clearness, while the stethoscope rests on the cardiac extremity and the percussion is made at the pyloric, as throughout the whole transverse length of the stomach. But, percussing in a vertical line, in a direction parallel to the longitudinal axis of the body, the metallic tone disappears at a short distance from the stethoscope, sometimes within two or three c.m. from it.

(4) These results are equally clear, whether the stethoscope remains immovable and the points of percussion vary, or if the percussion is always made at one point and the position of the stethoscope changes.

(5) When fixing the limits of the stomach in patients, by this method, it is useful to mark them first from one position of the stethoscope and then, the latter being changed, to observe whether the limits are the same. We have thus a clear proof that these limits correspond to the gastric region.

(6) To make all these researches with the greatest facility, besides the binaural stethoscope, we find the pleximeter above described very useful.—*Translated from "Giornale Internazionale delle Scienze Mediche" by Harley Smith.*

Clinical Notes.

NUCLEINS AND TUMORS—CASE: RECOVERY.

By John Stenhouse, M.A., B.Sc., Edin., M.B., Tor.,
Assistant Demonstrator of Pathology, University of Toronto; Physician to the Nursing-at-Home Dispensary, etc.

Miss O., ætat. 35, housekeeper, consulted me on 23rd April, 1895, under peculiar circumstances. Nearly three years before the date mentioned a tumor had been removed from her right breast, and soon after the operation another had developed in the left. When she called on me she had everything prepared to enter the hospital within a few days. In conjunction with her own physician, this had been arranged by one of the leading surgeons of the city, who had also done the previous operation. Just then her physician became ill, the operation had to be indefinitely postponed, and, in the meantime, she came to me for palliative treatment, for she was in great pain.

The breast was much enlarged, the nipple invaginated, and the tumor could be made out in the left lower quadrant. The skin was unbroken, not even discolored, and the axillary glands were not enlarged. I supposed that the tumor was adenomatous in character.

I had just been reading the report of the experiments of Prof. Chittenden, of Yale, on the physiological effects of Protonuclein, viz., leucocytosis. Of the mass of clinical reports, some of which spoke of the disappearance of tumors under its influence, I was rather sceptical. Their hue was too uniformly roseate. Physiological experiments, however, give us a sure and rational basis, and I felt that if anything was to be done, short of operation, it could only be accomplished through the agency of phagocytes. I therefore prescribed Protonuclein, one tablet (3 grains) four times a day; and for the immediate relief of the pain a lotion of:

Tr. Opii.,
Ext. Belladonnæ Liq.,
Glycerine, equal parts.

This was to be applied soaked in flannel and covered with oiled silk. The pain and swelling gradually disappeared, the nipple became evaginated, and the breast assumed normal proportions. Within three months there was no sign of the tumor, but, as a precautionary measure, the Protonuclein was continued for five months longer.

It is now almost three years and a half since treatment was begun, and there has been no recurrence.

The result is specially gratifying because of the odds the patient had to fight against. A chronic diarrhœa, from which she also suffered, contributed to keeping her condition below par. It resisted ordinary treatment till I suggested a local examination and found that the uterus was retroflexed. After the introduction of a pessary and the restoration of that viscus to its normal position, the diarrhœa quickly subsided. With occasional attacks of renal colic and the affliction of a cleft palate, it will readily be conceded that she has had her share of human ills. She is, however, very happy in the thought of having escaped the operating table.

I should hesitate to place such a case on record were it not for the combination of circumstances, which render it peculiar: first, that the diagnosis was made and the operation all but done by one of the most cultured surgeons of the city; second, that a similar tumor had been removed from the other breast; third, that in spite of the most adverse conditions the tumor disappeared under the exhibition of Protonuclein, which was the only treatment used; and fourth, that after an interval of three years and a half there has been no recurrence.

553 Sherbourne St., October, 1898.

Progress of Medicine.

MEDICINE

IN CHARGE OF

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AND

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ASSISTED BY

JAMES G. CAVEN, M.B.

British Medical Association.

The address in medicine was delivered by Dr. Thomas Richard Fraser, of Edinburgh. He first referred to the address in medicine delivered on the last occasion on which the association met in Edinburgh, scarcely a quarter of a century ago, by Dr. Warburton Begbie, who chose for his subject the enquiry, "Has the practice of medicine made a single step since the time of Hippocrates?" His conclusion was that no general doctrine—chemical, humoral, physical, or physiological—had been propounded which satisfactorily explained the nature and production of disease, and that therapeutic advancement had been obtained chiefly by observation of patients and adhesion to the classic methods of rational empiricism. Dr. Fraser proceeded to discuss the progress made in the comparatively brief period since Dr. Begbie's address, especially the remarkable development in our conceptions of the nature and production of many diseases. To-day we are able to formulate a doctrine of disease founded upon the satisfactory basis of experimental demonstration, and sufficient to explain many of its forms, and to already provide us with assured means and principles for its prevention and treatment. The indebtedness to our predecessors is especially conspicuous in the field of diagnosis, for they had already

constructed a nosology sufficient to distinguish the great majority of diseases; but here also the growth of collateral science has furnished us with physical aids to our senses, and chemical applications and methods which have enabled us to advance in accuracy of diagnosis, and even in the discovery of new diseases. Among the physical aids are the apparatus for blood examination, the sphygmograph and the ophthalmoscope. The capabilities of radiography are, as yet, undeveloped. The application of chemical processes to the examination of stomach contents, and of the urinary and other secretions, has advanced diagnostic precision. The agglutinating effects of the blood serum in certain infective diseases, as typhoid, malta, and relapsing fevers, and in cholera and anthrax, upon their respective pathogenic organisms; and the application of chemical pigments to reveal the existence of the germs of such diseases as pulmonary tubercle, pneumonia, and diphtheria, have removed many of the perplexities of diagnosis, and rendered identification almost a mechanical art.

But diagnosis, for the most part, deals only with symptoms, and has no immediate concern with the true nature of the malady, without a knowledge of which treatment can only be tardy and unsatisfactory. Our skill in diagnosis is far in advance of our knowledge of the true nature of the malady in many cases. For example, in the nervous system numerous forms of disease associated with morbid lesions of parts of the spinal cord or brain have been created, and the elaboration is a remarkable triumph of painstaking and skilful observation in symptomatology and in morbid anatomy. But to what extent is the patient a gainer? In most cases the gain is disappointing, except in the few cases in which surgical treatment is indicated. We can foretell, and perhaps modify, the course of the disease, and at times relieve symptoms, but our knowledge seldom enables us to cure it, unless it is possible to advance from diagnosis to the determination of the actual cause.

Gratifying results are to be obtained when there is reason to believe that the disease has been caused by a toxic substance present in the body, and according as this substance is the poison of syphilis, or of rheumatism, or of malaria, is the cure effected by remedies which have been proved capable of annulling the toxic effect of these poisons. It is thereby shown that the disease is not truly a product of the structural alterations which are present, but of a poison capable among other effects of producing these structural alterations. Changes in structure closely simulating changes of disease are produced by many of the more common poisons, such as

lead, phosphorus and alcohol. Such facts strongly suggest that the structural changes found in many diseases may be mere manifestations of a cause which would thus assume the importance of being the essence—the *vera causa*, of the disease, and that this essence is a toxic substance. The body is constantly subjected to the risks of poisons produced within itself as well as those introduced from without. Many of the poisons produced within the body are of the chemical nature of previously known alkaloids, and not a few of them rival the vegetable alkaloids in toxic power and reproduce their leading effects. Even in a state of health the organism is a veritable storehouse of these toxic substances. By such toxic influences the symptoms of cholæmia, gout, rheumatism, uræmia, diabetic coma, stercoræmia, and probably also of chorea, sunstroke, neurasthenia, asthma, and the idiopathic anæmias receive a sufficient explanation even though the toxic substance has not in all cases been identified. The doctrine of the toxic origin of disease has also been applied to mental affections, and auto-intoxication from poisons produced in the intestinal canal is believed to be an important factor in the causation of insanity. The toxæmic theory is destined to clear away much of the present vagueness regarding the pathogenesis of mental disease. It is not improbable that, in cancer, auto-intoxication by a poison generated in the cancer cells equally with, and in some instances to a greater extent than, structural degenerations of invaded tissue accounts for the symptoms and for the fatal termination—and this probability is strengthened by the separation from cancer of a substance possessing a hyper-thermic and powerfully lethal action.

The widely acting pathogenic influence of poisonous substances has, however, received its most definite and convincing support from the remarkable discoveries in bacteriology which have signalized this period. The pathogenic action of the microbes was at first attributed either to mechanical obstruction of the blood vessels, or to a biological action which enabled them to appropriate nutritive materials destined for the tissues of the body, and thus to deprive these tissues of life; but it was subsequently proved that these effects are mainly caused by the poisons which they produce. The poisons are of complex composition; some are alkaloids and others modified proteids, and others, again, have altogether unknown chemical composition. Many are of extreme and almost indefinitely great activity. Like other poisons, they are capable of producing structural changes, *e.g.*, the skin eruptions of many infectious diseases, the nerve changes produced by the diphtheria poison,

the production of nodules in the lung by dead tubercle bacilli, and numerous others. The demonstration of the toxic origin of infectious diseases has thus added greatly to the number of diseases which are caused by poisons, and has thereby been largely instrumental in establishing the doctrine of the toxic origin of disease.

Large numbers of disease-producing poisons are thus ever present in the body. Many substances known to have poisonous properties are intentionally introduced into the body, such as alcohol, tobacco, tea, and opium, while others, such as lead, accidentally find their way into it. The respiratory passages and intestinal canal are crowded with micro-organisms, and they teem in the soil, air, and articles of food. Many of them are producers of virulent poisons, and under suitable conditions proliferate with so great rapidity that a single bacterium may in twenty-four hours have multiplied itself into many millions of separate toxin-creating organisms.

What defence can man and animals oppose to these poisons? Certain animals are by hereditary endowment able to receive with impunity large quantities of poisons which in minute quantities are hurtful to other animals. Man may become so habituated to the action of several toxic substances that after a time he can take enormous doses without serious inconvenience. Such powers of defence are acquired against arsenic, opium, alcohol, and tobacco. These exceptional powers of defence have been variously explained, but the explanations offered do not account for all the observed phenomena, and it must in the meantime be assumed that tissues may gradually become accustomed, possibly by exhaustion, to the perturbations produced by substances which modify their normal condition, so that by-and-by a tolerance is induced. A fundamental difference between both congenital and acquired defence against ordinary poisons and that resulting from the action of disease toxins, venoms, and such like poisons exists in so far that in the former there is not produced in the blood any substance which plays the part of an efficient counter-poison or antitoxin.

In the case of many infectious diseases, one attack confers a power of resistance against subsequent attacks of the same disease. And it has been found that the symptoms of the disease, as well as the power of resistance to subsequent attacks, can be reproduced by the filtered microbe-free solution in which the pathogenic microbes have been cultivated. It is thus demonstrated that neither the original disease nor the subsequently acquired protection was actually due to the microbe, but to toxic substances produced by it.

It is further found that the blood serum of protected animals, itself destitute of poisonous properties, when introduced into non-protected animals, confers upon them this power of resistance, at least to a considerable extent. The nature and cause of this protection is now being widely investigated, and, while there is hope of solving the problems, many of the results are as yet difficult to explain. Amongst the disputed points are the nature of the process whereby protection or immunization is obtained, the origin of the protection-producing substances or antitoxins, and the manner in which they act as curative or therapeutic agents. Possibly a portion of the acquired protection is due to the tolerance brought about by the accustoming of the structures of the body to the action of the poison, as in the case of the ordinary mineral and vegetable poisons, but this tolerance could not continue for years, as immunity to an infectious disease often does. The theory that the pathogenic micro-organisms use up the constituents suitable for their growth and vitality is also untenable. The doctrine of phagocytosis may, to a limited extent, account for the destruction of living microbes, but phagocytosis can have but little influence upon the soluble toxins, which, since the introduction of this theory, have been proved to be in most cases the true causes of the disease symptoms. The pathogenic organism of an infected disease cultivated outside the body produces a toxin which, when administered to an animal, reproduces the symptoms of the disease, and, if the animal recover, and further quantities of the toxin are successively administered, an immunity may be acquired so great that the animal suffers but little inconvenience when fifty times the minimum lethal dose, or more, of this toxin is now administered. The immunity thus conferred is, however, only of short duration. The duration of this immunity in the case of diphtheria toxin, according to Roux and Klein, does not exceed from five to seven days. The immunity is brief compared with that produced by the microbes from which the toxins had originated. A serum that may be relied on to afford any durable protection is still a desideratum. In the case, also, of the venoms of serpents, the acquired immunity is of but short duration.

On the other hand the protection produced in a patient by an infectious disease may apparently endure for a lifetime, and the immunity from smallpox gained by vaccination for at least seven years. No other explanation is possible than that successive supplies of the antitoxin of the disease, or of smallpox, must be furnished to the body during the time that protection continues. It is impossible that these supplies could emanate from the pathogenic organism it-

self in its condition of original virulence. The microbe of smallpox has become so modified in the calf that, although it can no longer produce a virulent toxin, it still retains the power of elaborating a protective antitoxin and also retains sufficient vitality to reproduce its like through many generations in the human body. Evidence pointing in the same direction has been obtained from other pathogenic microbes, *e. g.*, that of fowl cholera and anthrax. Immunity equally with poisoning is dependent upon a soluble substance produced by the micro-organisms, and the duration of even a high degree of immunity resulting from the introduction of the immunizing substance as distinguished from the microbe itself is only of short duration. We can account for the prolonged immunity following upon the recovery from many infective diseases or from inoculation with vaccine lymph, only by assuming that so long as immunity continue, the microban sources of infective disease continue to exist in an attenuated and otherwise modified form in the protected body.

Unless by education we can so tame and civilize a pathogenic microbe as to subdue its virulent and hostile disposition, while at the same time its beneficial and protective properties are left unimpaired, the hope of obtaining—as for plague, cholera, and tubercle—immunizing vaccines equal in efficiency to the lymph of vaccinia will probably never be realized. Long enduring protection from infective disease cannot—if this theory is correct—be obtained by the introduction into the body of either the poisonous or the immunizing products of microbes—the toxins or anti-toxins—but only by inoculation of such microbes as are capable in the body of assuming a non-virulent form, or of microbes already converted into this form.

In the case of some diseases it is possible that the modification of the micro-organism from a poison-producing to an antidote-producing agent cannot be accomplished in the body, and this may explain the failure of certain diseases to protect the body from subsequent attacks of the same disease, well recognized in the instances of pneumonia, influenza, diphtheria, rheumatic fever, erysipelas and tubercle.

Such slight causes as a change in temperature, or the addition to or the removal from the fluid in which they are grown by a minute quantity of a chemical substance, may convert a non-virulent form of a pathogenic organism into a virulent form. Similar causes may, outside the body, also render moderately or intensely virulent a previously non-virulent microbe, and thus may be explained variations in the severity of epidemics, as well as the occurrence of

outbreaks of infectious disease not originated by infection from any previously existing case. Further, pathogenic microbes, attenuated as to their virulence, but not as to their protective power, may enter the body and render it immune by a process of accidental vaccination. We may thus explain repeated exposure to infection without the production of disease and the immunity enjoyed by the inhabitants of towns and districts daily subjected to the virus of typhoid, malaria, or yellow fever. Pasteur has established that pathogenic microbes are not morbid entities, but can assume various forms of physiological activity, depending on the media in which they live and multiply. Their virulence can be exalted or enfeebled and each state can be fixed.

Passing to the origin of the protection-producing substances —antitoxins or antivenins—the author refers to the generally accepted theory that a reaction occurs in the tissues of the body after the introduction of virulent microbes or their toxins, whereby either a proliferation of the leucocytes and the production by them of the protecting substance is excited, or the normal cells of the body are stimulated in such a way that they secrete the protective substance. In many instances leucocytosis does not occur when immunity to a high degree is established by venom. And twelve times as much antivenin is required to neutralize the effect of the minimum lethal dose of venom if the antivenin is injected into the animal half an hour before the venom is administered instead of being mixed in a test tube with the venom before administration. The former condition would certainly be more favorable for the production of leucocytosis. No proteolytic or fermentative action has been discovered in the case of any toxin or venom; by subjection to certain external influences, such as elevation of temperature, and the influence of electric currents and of certain chemical reagents, toxins and venoms may have their poisonous action destroyed, while the immunizing or protective action is retained; and toxins have been found actually to contain protective or remedial substances along with their toxic ingredients. These considerations suggest that the protecting substance originates directly from the toxin, or is indeed an ingredient in its complex composition. Venom may be introduced by the stomach in doses hundreds of times greater than those which would prove fatal by subcutaneous injection without any poisonous effect whatever, but such administration by the stomach nevertheless so protects the animal that considerably more than the minimum fatal dose may now be subcutaneously administered without causing death. The venom must have been

split up in the alimentary canal so that its toxic constituents were separated from those that are antitoxic or protective, the former either being destroyed or at least not absorbed, whilst the latter had passed into the blood in sufficient quantity to protect the animal against otherwise lethal administration of venom.

All these facts appear to indicate that the antitoxic or immunizing substances originate, not from vital reactions upon constituents of the body, but from the toxins themselves, being produced by chemical changes in them, or being actually among their normal ingredients.

The doctrine of the toxic origin of disease does not fail to supply general principles as well as specific indications for treatment. It gives a rational explanation for the value of eliminative treatment. It explains also why treatment should also include the adoption of measures for increasing the resistance afforded by the body to toxic and morbific processes. By the demonstration of the production of many diseases by toxins generated by micro-organisms, the opportunities for the application of these principles have been greatly extended. After the administration of a lethal dose of tetanus toxin or cobra venom, even when the symptoms are well marked, and advancing to an otherwise inevitably fatal issue, we can, by giving a sufficient dose of serum from an immunized animal, not only arrest the disease and conquer death, but also prevent the structural changes in the muscle fibre and kidney respectively which characterize the poisonous action of the tetanus toxin and cobra venom.

Antitoxins are destitute of any distinct physiological action, and their curative action cannot therefore depend on physiological antagonism, and it is highly improbable that it has any biological basis whatever.

Experiments with serpent venom and antivenin give results that are difficult of explanation on any other supposition than that a combination, chemical or mechanical, is effected between the venom and the antivenin. When the conditions are the most favorable for ensuring contact between the antitoxin and the toxin, the antidotal action is more powerful than when the conditions are less favorable for this contact. If the antivenin is administered after the venom it requires an enormously larger dose to prevent a fatal issue than if it is mixed with the venom before administration. This experimental result emphasizes the lesson that for the effective treatment of an infectious disease the quantity of antitoxin must be a very large one. The antitoxic serums frequently in use at the present

time must be regarded as too dilute. We cannot as yet produce antitoxic serums sufficiently powerful, in doses which can be administered, to cure a patient suffering from the effects of a large lethal quantity of toxin. But it is possible that chemistry may yet solve the problem of separating the curative from the worthless ingredients, and thus furnish us with powerful doses in small bulk.

Serum-therapy has merely entered the first stage of its development, and already the results are of much value. The mortality of diphtheria has been reduced from 40 per cent. to 8 per cent.; the mortality of hydrophobia has shrunk at least from 16 per cent. to 1 per cent.; the prognosis of tetanus has been deprived of much of its gloomy forebodings; the cure of pneumonia, of tubercle, of erysipelas, and of septicæmia, is on the eve of being realized; a complete demonstration has been obtained of the power of antivenins to prevent the toxic and lethal effects of venoms; and the experimental data are being surely accumulated for completing the greatest triumph of preventive medicine by the discovery of an antitoxic serum for the cure of smallpox. These are to be regarded as the first-fruits—in some cases requiring further maturing by the light of science—of the ample harvest which is ripening.

THERAPEUTICS

IN CHARGE OF

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PERTUSSIS.

R. Bromoform	48	gtt.
Ol. amygdal. dulc	15	gm.
Pulv. acaciæ	10	"
Aquæ laurocerasi	4	"
Aquæ dest.....q. s. ad	120	"

M.S.—For children under five years, four drops three times daily. Children from five to ten years, twenty drops daily.—*Marfan, Jour. de Med. de Paris.*

UNCONTROLLABLE VOMITING IN PREGNANCY.

Dr. Geoffroy (*Le Scalpel*, January 1, 1898) indicates a new method of treatment based on the employment of very gentle massage. This author, who has for a long time employed prolonged palpation in the treatment of affections of the digestive tract, has observed in several cases of uncontrollable vomiting that there existed at a point in the digestive tract a localized spasm transferred by reflex irritation from the uterus. This spasm, according to Dr. Geoffroy, was localized at two points; first, at the junction of the stomach with the duodenum; second, at the point well down in the left iliac fossa, at the posterior part of this fossa at a point which is never any other than the ileo-pelvic angle of the colon, formed by the union of the fixed iliac part of the colon with the movable pelvic part. This spasm causes a permanent state of contraction, which deep palpation readily discloses. This peculiarity is, for the writer, so characteristic that when he encounters it in a woman who vomits or who has a cessation of menses he diagnoses pregnancy. This contraction is encountered in subjects affected with various gastro-intestinal troubles, neurasthenia, the beginning of appendicitis, etc.

It is a pathognomic sign of reflex hyperæsthesia of the intestinal canal, of which the morbid symptoms vary from those produced by mild cardiac disturbances and simple nausea to uncontrollable vomiting. By using precautions to avoid pain in making gentle pressure, both slow and progressive, with the ball and not with the extremity of the finger, one can perceive at the point mentioned a series of nodules, ordinarily very small, which are hard and resisting, but which become softened in proportion as the digital pressure is gentle, slow and progressive. There is a sensation of gas and of liquids under the fingers, with a slight gurgling, generally perceptible to both the physician and the patient. The induration ceases, the nodules disappear, and the discomfort they have excited is replaced by a sensation of well-being and an inclination to rest, which indicate that the time has come to suspend the treatment. In the first case in which the author applied this treatment, five or six séances were requisite to effect a complete cure. In general, two or three séances, sometimes only one, cause the vomiting to cease. It is useless to prolong the treatment in order to avoid a return of the trouble. The method is useful in all cases if properly applied, and is perfectly harmless.—*Medical Record.*

Indications for Venesection.

1. In affections of the central nervous system, such as cerebia hyperæmia, apoplexia cerebri, inflammation of the cerebral membranes. 2. Kidney diseases in the stages of edema and uræmia (Saccharjin and Hoffman). 2. Cardiac disease of valvular origin. In great disturbances of circulation in which the venous system is overtaxed and the arterial pressure raised (Liebermeister). 4. In pneumonias with an exceptionally severe onset, absolutely in the first stage. 5. In various stages of chlorosis (Dyes, Wilhelmj).—*Dr. Moritz Kacsar, Weiner klinische Rundschau.* [*Med. Record.*]

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

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MEDICO-LEGAL ASPECTS OF GONORRHŒA.

The following case was reported by Dr. A. Neisser, of Breslau, Germany (*Jour. de Méd. de Paris*, vol. ix., No. 39): A man was charged with having communicated gonorrhœa to a young girl with whom he copulated. She prosecuted him under the German code, which punishes all injuries to the health of another. The defendant admitted that he had had gonorrhœa several years previously, but claimed that he was healthy at the time of his relations with the young girl. The charge against him was based chiefly on the affidavit of the family physician of the young girl. The attorney for the defence moved the rejection of this affidavit on the ground that it was not based upon a microscopic examination. The court chose Dr. Neisser as expert and submitted to him the following questions: First, Can gonorrhœa be established with certainty other than by a microscopic examination? Second, How long may gonorrhœa manifest itself after infection in women? What is the extreme period when an affected person can fail to be fully acquainted with his state? Third, Was the disease of the complainant (gonorrhœa) due to an infection? Fourth, Had the accused still gonorrhœa when he last copulated with the complainant? Neisser rendered the following replies: A skilful physician may diagnose gonorrhœa from the clinical symptoms, but the procedure is subject to grave error. The microscope procedure is alone of forensic value. The second question cannot be answered for lack of data except in a general way. The symptoms and progress of the disease vary according to the seat of infection and method of propagation. Neisser, however, expressed the opinion that he could not accept the prevalent view of the lesser virulence of old gonorrhœa. The third question he did not have sufficient data to answer. As to the fourth question, he was led to believe by examination that the accused was still infected at

the time when he last slept with the complainant. There had been found the remains of a gonorrhœa and gonococci. The accused had not contracted any new infection since the relations with the complainant. Nothing, however, showed that the defendant had a knowledge of his morbid state, and he appeared to have acted in good faith.

[Many a man carries gonorrhœa latent for years. The seminal vesicles may become specifically inflamed and be a source of re-infection or of innocently infecting others. The microscope should be used to verify the case and the examination made after stripping the vesicles.]

Urethral Fever.

Tying a catheter into the urethra is one of the most effectual methods of preventing the occurrence of rigors, a fact that is quite inexplicable if rigors are caused by reflex irritation of the deep part of the urethra.—*Moullin.*

The Treatment of Hemorrhoids.

Dr. Coston (*Medical and Surgical Reporter*) gives these points in favor of the clamp and cautery: 1. In the operation with the ligature you tie up the most sensitive of all nerve ends, and there is intense pain, which will be kept up until the stump sloughs and the ligature comes off. In the cautery operation the nerve end is simply cut away and cauterized, and there is nothing left for it to do but cicatrize, and it is left in the very best possible condition for this. 2. The ligature may slip off and the secondary hemorrhage occur; after the clamp-and-cautery operation there is no danger of secondary hemorrhage. If hemorrhage occurs, it does so immediately, and the operator can blame only himself for it. 3. There is no danger of a recurrence. Kelsey, of New York, and Smith, of London, who have a large experience with operations, support this statement. It will be admitted that recurrences do follow the ligature operation. 4. Convalescence is much more quickly completed, for the reason that it begins at once under the eschar produced by the cautery, and would be completed by the time the ligature came away should the two operations be used on separate tumors in the same case. 5. The mortality following the clamp-and-cautery operation is practically *nil.* 6. The clamp-and-cautery operation requires less after-care from the operation. 7. There are no unpleasant sequelæ.

[We can corroborate the above in its entirety, and add that the procedure is best in ninety per cent. of all cases of hemorrhoids.]

ARGONIN AND PROTARGOL IN TREATMENT OF GONORRHŒA.

Prof. E. Finger, in *Die Heil Kunde*, after relating his former teaching of the treatment of gonorrhœa, by omitting local applications, says :

This standpoint, taken up by me, as I mentioned already in the last edition of my "Blennorrhœa", is not justified in the face of a purely antiseptic treatment which corresponds entirely with the requirements in so far as it combats, in the first instance and solely, the gonococcus, and tries to reduce the inflammatory symptoms only by way of removing the cause of the latter.

The drugs recommended up to the present time, viz.: ammonium sulfo-ichthyolas and Argonin come very near this ideal standpoint, as I do not hesitate to state, in view of my own experience, extending over several years.

In the face of these drugs, I and numerous colleagues, who had entertained the same opinion, were induced to modify our standpoint with regard to the commencement of local treatment.

Although originally we had adhered to the principle that the local treatment of acute gonorrhœa by astringents and antiseptic astringents is contrary to indication in the beginning and in the acute stage of recent blennorrhœa, and that it must be referred to the second sub-acute stage of the process, we have no reason to maintain this principle as against pure antiseptics ; on the contrary, if we have to deal with such, the maxim will be "the earlier, the better." I have already adopted this latter standpoint during the last few years with regard to ammonium sulfo-ichthyolas and Argonin, mostly with a satisfactory result. There are failures, no doubt, but they only go to show what individually different diseases gonorrhœa represents in the different organisms, how different are the degrees of virulence, and in consequence, resistance against antiseptics, which the gonococcus exercises upon the different mucous membranes. These failures may certainly also be ascribed to the fact that, notwithstanding a very early use of antiseptics, the gonococcus succeeds in some cases in speedily reaching hiding places or refuges (connective tissues, glands, etc.) from which the antiseptic, on account of the therapeutical inaccessibility of the locality, is not able to expel it.

In Argonin we have gained a new important factor in the treatment in so far as for the first time an organic combination of silver, soluble silver albumen, was thereby introduced into the local treatment of gonorrhœa, which, in fact, in addition to its antiseptic qualities, appears to possess also a greater capacity for penetrating into the

tissues. Argonin, however, seems to carry with it the disadvantage of a difficulty and unreliability in the manufacture. It is for this reason that I met with some striking failures in treating with Argonin in the early stages, which, when examined more closely, could be traced to the fact that the preparation used for injection contained only very small quantities of silver, certainly less than the four per cent. which it was supposed to contain, and could not therefore exercise its antiseptic effect.

Protargol introduced into therapeutics by Neisser brings us a step nearer to the above-mentioned ideal. Previous to its introduction, viz., in August of last year, I was favored with a communication from my respected friend, Prof. Neisser, informing me of the efficacy of this preparation and placing at my disposal ample material in order to begin the experiments in question.

[We have used Argonin for the past two years with most gratifying results, but for some time past have used Protargol with better results. Protargol in solutions is very slightly alkaline and very bland to the urethral mucous membrane.—E.E.K.]

PÆDIATRICS.

IN CHARGE OF

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AND

W. J. GREIG, B.A., M.D.

Cases of Diphtheria Treated by Antitoxin at University College Hospital, London.

In *The British Medical Journal* (Sept. 3rd, 1898) Drs. Sidney Martin and Bertram Hunt publish a report of the treatment of diphtheria in University College Hospital for the years 1896 and 1897. This supplements a previous report on the same subject for 1895, which was the first antitoxic year.

An exhaustive analysis brings out many interesting features.

During the two years there were 178 cases treated with injections of antitoxic serum. These cases were of more than average severity because only severe cases were admitted to the hospital owing to the limited number of beds. Bacteriological examination showed the diphtheritic bacillus in pure culture or mixed with cocci in 149 cases; in 18 cases the bacillus was not found, and in 11 cases there was no record found.

It has been suggested that the lessened mortality during the past few years has been due not so much to the serum treatment as to the introduction of the bacteriological diagnosis of diphtheria into practical work, so that mild cases which formerly would not have been diagnosed as diphtheria are now admitted as such, chiefly on the bacteriological diagnosis, that their inclusion in the total number of cases would account for the lowered mortality. This factor can have no effect in the reduction of mortality in this instance, for almost all the cases were admitted into the hospital on clinical grounds alone, the bacteriological examination being made afterwards.

Treatment Employed.

In all these cases a subcutaneous injection of antitoxin was given within twelve or twenty-four hours after admission, the dose varying somewhat from time to time. In 1896 the dose was between 2,000 and 20,000 normal units, the average being about 7,200 ; one-third of the cases receiving 2,000 to 4,000 normal units, and two-thirds receiving 5,000 to 20,000. In 1897 the number of units given was between 4,000 and 12,000, the average being 7,000 to 8,000 ; one-seventh of the cases receiving 4,000, and six-sevenths between 6,000 and 12,000 normal units.

In addition local treatment by sprays and swabs was employed.

The effect on mortality is shown in the appended table.

In all there are seven years ; four prior to antitoxin, and the three antitoxic years.

The mortality in the published 178 cases was 17 per cent.

Table I.—*Mortality of All Cases.*

Year.	Age.	Laryngeal Cases.			Pharyngeal, Nasal, etc.			Total		
		No. of Cases.	Deaths.	Percentage Mortality.	No. of Cases.	Deaths.	Percentage Mortality	No. of Cases.	Deaths.	Percentage Mortality.
1891	5 years and under	25	18	70.0	14	4	18.7	62	27	43.5
	Over 5 years	5	3		18	2				
1892	5 years and under	21	14	60.0	12	1	14.3	60	20	33.3
	Over 5 years	4	1		23	4				
1893	5 years and under	32	24	78.0	26	6	10.9	105	39	37.0
	Over 5 years	9	8		38	1				
1894	5 years and under	26	3	47.0	8	5	30.0	64	25	39.0
	Over 5 years	8	3		22	4				
1895 (1st antitoxin year).	5 years and under	23	7	33.3	25	10	10.0	75	21	28.0
	Over 5 years	7	3		20	1				
1896	5 years and under	18	7	40.0	30	6	24.4	98	16	17.7
	Over 5 years	4	2		38	1				
1897	5 years and under	24	6	23.5	29	7	13.0	88	15	17.0
	Over 5 years	10	2		25	—				

On Neisser's Diagnostic Stain for the Diphtheritic Bacillus.

The following abstract of a paper on this subject by R. T. Hewlett, M.D., appears in the *British Medical Journal* (Sept. 3, 1898). The formula is :

(1) One gramme of methylene blue (Grubler's) is dissolved in 20 c.cm. of alcohol (96 per cent.) and mixed with 950 c.cm. of distilled water and 50 c.cm. of glacial acetic acid.

(2) Two grammes of benzoin are dissolved in 1,000 c.cm. of boiling distilled water, and the solution is filtered.

Cover-glass specimens prepared from fresh serum cultures are stained in No. 1 for 1 to 3 seconds, rinsed in water, counter-stained in No. II- for 3 to 5 seconds, washed in water, dried and mounted in Canada balsam.

So treated, the diphtheria bacillus appears as a slender, longish rod, stained brown, and generally containing granules of a deep blue or inky tint. There are generally two granules, situated at the poles, occasionally a third at the middle of the rod. The method has been tested on about 50 cultures from diphtherial throats, and the characteristic appearances have been obtained in every case. The pseudo-diphtheria bacillus of Hoffmann does not give the granulation. A slightly longer treatment than that recommended by Neisser has seemed to yield better results—namely, five seconds in the blue and ten seconds in the brown.

An attempt has been made to extend the method to swabbings or membrane from the throat. With swabbings the results were not very successful, an error of about 14 per cent. occurring in 30 cases.

With fresh membrane, care being taken to avoid fallacy from the presence of fragments of leptothrix and diplococci, which may simulate the diphtheria bacillus, Neisser's method often affords a rapid means of positive diagnosis. If a negative result be obtained recourse must be had to culture methods.

Creasote in the Gastro-Enteritis of Nurslings.

Zangger (Rev. Internat. de-Med. et de Chirurgre) asserts that in recent cases of gastro-enteritis three or four doses of creasote given in water and alcohol will be sufficient to arrest the vomiting and diarrhœa. Cure results as a rule in two or three days. Chronic cases require longer treatment. The anti-fermentative action of the creasote explains the good result.

The Connection Between Adenoid Vegetations and Enuresis.

In an article on this subject (*Zahrbuch fur Kinderbeilkunde*) Groenbeck asserts that a close connection exists between nocturnal incontinence and the existence of post-adenoid vegetations.

One hundred and ninety-two cases of adenoid vegetation came under the author's observation. Thirty suffered from enuresis. A removal of the adenoids in twelve of these cases was followed by a cessation of the incontinence. In two of these the adenoids reappeared, followed by a return of the incontinence. Fifteen were considerably improved. Two slightly improved. In three the operation was without any appreciable effect. One case was lost sight of, and seven refused operation.

Double Harelip of the Lower Lip.

W. O. Roberts, M.D., Professor of Surgery in the University of Louisville, reports a case of double cleft in the lower lip occurring in a child aged three months. The clefts resembled in every respect a harelip of the upper lip.

There was a little cleft in the lower jaw which did not extend entirely through the bone. The author had never seen nor heard of such a case before. Reasoning from embryology it is difficult to understand how such a defect should occur.—*Archives of Pediatrics, April, 1898.*

Influence of Antitoxin in Laryngeal Diphtheria With and Without Antitoxin.

Rosenthal (*Maryland Medical Journal*, July 30, 1898) gives his experience in sixty cases which occurred in his private practice, many of the cases being treated in consultation with fellow-practitioners. A most interesting feature of the paper is a chart giving in tabulated form full clinical data, including notes on diagnosis, prognosis, and the general characteristics of each case.

Rosenthal is a warm advocate of large initial doses, and when repetition is necessary, as it is frequently in laryngeal diphtheria, of repeating twice or three times in the first twenty-four hours and always using a larger number of units than was contained in the preceding dose.

The claims made for the superiority of this method are well sustained by a high rate of recoveries, as will be observed by the

following, taken in substance from the report: "I wish to record sixty cases treated with antitoxin, taken from my case-book in the order in which they were seen. They are such cases as every general practitioner meets, the only difference being that cases not showing marked laryngeal involvement have been excluded from the report. Twenty-eight required intubation, and of these eight died. Of the cases which did not require intubation but one died. This death I think could have been prevented had intubation been performed, as death was due to suffocation from rapid exfoliation of the membrane. In a former paper I made the assertion that all cases not requiring intubation should recover, and still hold to this opinion."

The mortality rate of the entire series is 13⅓ per cent., which is most gratifying, especially when it is remembered that many of the cases were what was formerly known as membranous croup and yielded a frightful death-rate under the best recognized old-time treatment.

In all the cases except four, concentrated antitoxin was employed, and doses from 2,000 to 4,000 units were used in the severest cases. In one case, which relapsed three times, a total of 16,500 units was employed. The child wore a tube seventy-two hours and the case was extended over twenty days. The issue was favorable.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto; Surgeon to St. Michael's Hospital

ASSISTED BY

J. W. SMUCK, M.D.

Sanitary Science as Applied to Cities.

The continual growth of cities, with the increase of the various conveniences therewith involved, means that the science of sanitation must be more carefully looked into than heretofore. New questions are continually coming to the front, and not the least of these is the locking up in the soil of the various poisons, or, by means of the permanent roadways now laid, forced to escape either into the dwellings or in the immediate vicinity thereof. One of the most beneficent agents known to man is pure air, and when we almost entirely exclude the air from permeating the soil many noxious substances are there formed and must escape in the direction of least resistance. Every time the roadway is torn up for purposes of repair or renewal of the various underground conduits lying along the streets of a large city, a vent hole is created, thereby polluting the air in the immediate vicinity. These openings are being made continually, and, to a large extent, unnecessarily so. Were means provided whereby all of the underground conduits could be placed in a tunnel easily accessible a great advance would be made in sanitation. The tunnel could be constructed almost as cheaply as a first-class sewer, and might easily accommodate water, gas and sewer pipes, electric light, telephone, telegraph and fire alarm wires, so arranged as to admit of the repair or renewal of any part without expensive excavations and obstructions of traffic. It would seem that these would be of economic as well as sanitary benefit.

PROPHYLAXIS OF TUBERCULOSIS.

M. Graucher reported the findings of the committee composed of Mm. Reoussel, Bergeron, Bernier, Brouardel, Colin, Magnau,

Monod, Motel, Napias, Nocard, Proust, Roux and Vallin in *La Progrès Médical*, May 7, as follows:

(1) The academy confirms the spirit of these conclusions and of its vote in 1890, which designated three prophylactic measures:

(*a*) All the sputa should be collected in a handkerchief or a vessel used for that purpose.

(*b*) In order to avoid the danger from infected dust, washing or wiping the floor with a damp cloth should be used instead of a broom.

(*c*) All milk used, no matter from what source obtained, should be boiled.

(2) As regards the family, the academy recommends to all physicians a continued use of measures of protection against the spread of the disease from the moment that tuberculosis makes its appearance; physicians are also advised to maintain, as far as possible, the tuberculous patient removed from all outside influence, in order to adopt an early diagnosis and an appropriate treatment.

(3) For the army, the academy demands special reform suitable to cases of tuberculosis in the first stage of the disease, before expectoration of bacilli begins, and a stringent reform from the moment the sputa is found to contain the bacilli of koch. The commission also appeals specially to commanders and to the directors of the sanitary service to permit the enforcement, in all barracks and hospitals, of the three measures mentioned above.

(4) The school, the workshop, the store, etc., under the authority of the teacher, the director, the chief of the department, etc., are reminded earnestly of the importance of the question of hygiene, and of the simplicity, the facility of the means sufficient to realize the efficiency of combating the extension of tuberculosis, which menaces the health of families.

(5) The academy approves the conclusions formulated in the report of the Hospital Commission in so far as it refers to patients and the hygiene of hospitals, viz.:

(*a*) The separation of tuberculous patients in pavilions or in separate departments while awaiting the erection of new sanataria.

(*b*) Antiseptic measures are to be employed in all tubercular wards and in rooms used in common, particularly in the cleansing of the floors and the prevention of dust caused by sweeping.

(*c*) Improving the condition of the nurses by increasing their remuneration and gaining a better class of service, and by securing a retreat for those who have filled a term as competent sanitary infirmarians.

(6) The academy approves the restrictions imposed by the law and the new measures enacted against the use of muscular flesh of tuberculous animals; the seizure of all such diseased meat and its destruction ought to be allowed, with some restrictions to the cases in which the disease is evident. It further recommends to those who raise cattle the use of tuberculin for diagnosis, and the elimination, by the slaughtering of all their animals when found to be slightly tubercular, and still comparatively free from danger of spreading the disease.

(7) Finally the academy, wishing to emphasize the unusual interest which attaches to the continuance of its work in favor of the prophylaxis of tuberculosis, approves the formation of a new and permanent commission to be called: "Commission de Prophylaxe de la Tuberculose," the object of which will be to encourage and to harmonize the efforts employed to prevent the spread of the tubercular bacillus.—*Sanitarian.*

Editorials.

ELECTIONS FOR THE SENATE OF THE UNIVERSITY OF TORONTO.

WE publish in this issue the results of the recent elections for the Senate of the University of Toronto. While we are pleased with the returns in medicine, we have to regret that the unfortunate split in the medical faculty should again have been exposed to public view. Extreme partyism in a medical faculty is generally conceded to be bad. The question naturally arises—who are responsible for this deplorable family fight? We can answer the question somewhat briefly. The friends of Drs. Reeve, Cameron, and A. B. Macallum, who framed a ticket in 1892 for the purpose of defeating Drs. McFarlane and Wright in the Senate election at that time, and with the expressed intention of injuring in divers ways others of their colleagues, are directly responsible for the most lamentable contest that has ever occurred in connection with this faculty.

We had hoped that the extreme bitterness was dying out, and that the expressions of "loyalty to colleagues" and "harmony in the faculty," which have greeted us in recent years, were not a hollow mockery. We had supposed that there was a general feeling that our bickering in public should cease, and had expected that the old members, Drs. Graham, Cameron, Aikins and Wright, would be unopposed. Such, in fact, appeared to be the general opinion. Some of the extremists of a certain party, however, were determined not to allow this, and secretly organized with the result that the nomination of Dr. Jas. M. MacCallum was put in at the last moment, and at the same time letters were sent broadcast among the graduates asking them to "plump" for Drs. Cameron and MacCallum. The friends of Drs. Graham and Wright promptly accepted this challenge, and at the same time worked for Dr. Aikins, who has always been a steadfast supporter of their party in the Senate.

We do not propose, now, to offer any opinions as to the merits

of the two parties; we wish simply to state facts. In the two wretched contests of '92 and '98 one party was aggressive, while the other acted in self-defence, having at the same time a fixed conviction that its views in relation to University matters were correct. We are very glad to learn that many men belonging to both parties —probably a large majority—are heartily tired of this internecine warfare; and we sincerely hope that, in the near future, peace and harmony will exist in a faculty which should show no divisions in connection with the general policy which should prevail among the governors of our Provincial University.

CANVASSING AT SENATE ELECTIONS.

THE ideal method of conducting all elections, whether academic or political, is to have absolutely no canvassing. Each member of the electorate should vote in the way he thinks right, without being influenced by the solicitations of the candidates or their friends. We give this dear old platitude for what it is worth, from a sense of duty, and not because of its practical importance. We may theorize as we like, we may quote the old truisms, we may occasionally find a brilliant genius who will give them new clothing; but we are not going to stop canvassing for some time to come.

After all, canvassing is no crime. If it were the parties who "ran" the last medical election would really be a pretty bad lot on both sides. What is most important in connection with the subject is the question of methods. There have been many discussions about the matter during the last twenty years or more. Some have contended that none but the official papers, sent out by the registrar, should be used. During the last fifteen years names of candidates have been printed on unofficial papers at all or nearly all the elections. This method was first adopted by the Arts' men. Some object to this also. As a matter of fact, if unofficial papers are accepted, it matters but little whether the names are written or printed. We are inclined to accept the view that the official papers are the ones that should be used; but, after all, it is a matter of no great importance whether a man votes on a blue paper sent out by the registrar, or a white one not coming from official sources.

When the question came up many years ago at a "count" the late Chief Justice Moss ruled that any paper which clearly indicated the way a graduate wished to vote should be accepted. In one particular instance a graduate had written a letter on ordinary

note paper, stating that he wished to vote for A.B. This vote was accepted. The scrutineers, in counting the vote, have to act in accordance with the statutes governing senate elections. The following extract from its statutes referring to this phase is as follows :

"The votes at an election, by convocation for chancellor and for members of the senate respectively, shall be given by closed voting papers, in the form of the Schedule of this Act, *or to the like effect.*"

A HOSPITAL FOR CONSUMPTIVES IN TORONTO.

IT is well that both the profession and the public fully appreciate the fact that phthisis, which cripples and kills so many people, is a contagious disease. It kills more of our citizens than all other infectious diseases together, and yet in the past no attempt has been made by municipalities to make proper arrangements for the isolation and treatment of consumptive patients. An excellent sanitarium exists at Gravenhurst, but it has done nothing for the sick poor

A meeting was held in Toronto, October 14, to consider the advisability of establishing a sanitarium in the vicinity of the city with a view of looking after the sick poor suffering from phthisis. His Worship the Mayor, who presided, said that such an institution was as much a necessity to the municipality as an isolation hospital or a smallpox hospital. Dr. Peter H. Bryce expressed a decided opinion that all municipalities in the Province should care for their consumptive patients. Dr. Playter outlined a scheme for the establishment of a hospital for consumptives.

Dr. E. J. Barrick, who has given the subject much consideration, proposed, seconded by the Hon. G. W. Allan, the following resolution, which was carried unanimously: "That in the opinion of this meeting it is not only desirable, but highly necessary, in the public interest, that a sanitarium or hospital for the treatment of consumptives should be established in the vicinity of this city under the control of a citizen's committee and the Medical Health Department, believing that such an institution, under such management, would not only be a boon to our afflicted poor, but also a means of protection from infection to the rest of the community." A strong committee, composed of leading laymen and physicians, was then appointed to carry out the terms of the resolution, with His Worship the Mayor, chairman, and Dr. Edward Playter, secretary.

THE ONTARIO MEDICAL REGISTER.

THE Ontario Medical Register, which contains the names of all physicians who are entitled to practise in Ontario, has just been published. In addition to the names of members of the College of Physicians and Surgeons it contains much information about the Medical Act, the territorial divisions, etc. Since the publication of the former register in 1892 there have been 265 deaths of members. There are 3,510 names on the Register; and of these 649 practise outside of Ontario. The addresses of 361 physicians are unknown; but, probably, all these live outside of the province. Out of the total number registered there are, therefore, 1,010 not practising in Ontario. This will leave the large (too large) number of 2,500 registered practitioners in the province. The whole population, according to the last census, is 2,235,000. The Registrar, therefore, estimates that the proportion of physicians to the whole population is 1 to 890 inhabitants. The proportion according to the Register of 1892 was 1 to 906. The list of members has evidently been very carefully revised, the "residence" column being the only one that is incomplete. Upon the whole, however, this Register is the best that ever was published, and for this the Registrar deserves the thanks of the profession.

Correspondence.

To the Editor of THE CANADIAN PRACTITIONER:

SIR,—A few days ago I received the following letter and book mentioned therein :

190 Yonge Street, Toronto, Sept. 15th, 1898.

DEAR SIR,—Early in June we obtained an advance copy of the new B.P. and, having thoroughly perused it, we thought it would be nice to hand a copy to the busy medical practitioner for an office reference. We accordingly secured a number of copies which have just arrived, and beg that you will accept one for your office with our compliments.

You will find on perusal that there are very many changes from the '85 edition, and that there is a very marked advance in Pharmacy. We have anticipated the wants of the medical profession from the new B.P. and are fairly well prepared to meet all demands; some of the preparations are, at present writing, on the ocean coming over to us, but will be here in a few days, others we have made or are in process of manufacture. We will be pleased to have you call and examine our dispensing stock, or any special preparations which you may desire and obtain a sample if you wish. Our aim is to be thoroughly up-to-date and in accord with the medical profession, and to aid them as far as it is in our power to do by putting the very best ingredients into the prescriptions strictly B.P. and U.S.P. when not in B.P.

When you desire anything urgently, we have special messengers which we despatch instantly; all prescriptions of an urgent nature are sent out by special messenger.

When you want to purchase any drugs or pharmaceuticals we will be pleased to quote you prices. We carry a very extensive stock of sundries, almost everything except surgical instruments.

All dispensing is done and checked by qualified chemists. As the Ontario Medical Council have not yet authorized the new B.P., we ask you to put '98 on prescriptions when desiring the new preparations.

Trusting the new B.P. will be a big advance on all previous editions, We remain,

Yours truly,

THE T. EATON CO., LIMITED.

This seemed such a clear case of "bribery and corruption" that I wrote the company by return mail that I was unable to accept the book and therefore returned it.

I trust that this attempt to "capture the profession," by the free distribution of a job lot of books will have received its just deserts—the prompt return of the book by every member of the profession, long ere the next issue of your journal.

Yours,

GENERAL PRACTITIONER.

To the Editor of THE CANADIAN PRACTITIONER.

DEAR SIR,—I have the honor to forward to you a copy of an extract from the minutes of the thirteenth annual meeting of the International Conference of State and Provincial Boards of Health, of North America, held at Detroit August 10th and 11th, 1898. The matter referred to is one of such paramount importance that it has been deemed desirable to bring it to the attention of those charged with public education within Ontario, as well as those specially appointed to deal with public health matters.

Yours truly,

PETER H. BRYCE,
Secretary.

Toronto, Sept. 15th, 1898.

The chair appointed Drs. Bryce, Baker and Swarts a committee who, in due time, presented the following resolution, which was, on motion, adopted:

Whereas, It has been the unanimous voice of the International Conference of State and Provincial Boards of Health of North America, that since tuberculosis, which causes on this continent more deaths than all other contagious diseases together, is now recognized by all scientific and medical authorities as both curable and preventable; and

Whereas, Since the onset of the disease depends especially upon hereditary weakness, and on malnutrition induced by over-crowding, bad ventilation, and over-pressure in school, social and commercial life; and

Whereas, Since the continued presence in the homes of the poor and others of so many cases of this chronic disease means almost certain death to the patient, and probable infection to other members of the family, be it therefore

Resolved, That this Conference does publish, and instruct the Secretary to forward, copies of these resolutions to the Legislature, Departments of Education and Municipal Authorities of the several States and Provinces represented in the Conference, urging upon them the imperative need of:

(1) Having all schools and colleges placed under proper medical supervision with regard to ventilation, over-crowding and over-pressure in studies;

(2) Having all hotels, boarding-houses and work-shops where consumptives may be employed placed under municipal supervision and inspection;

(3) Urging all State and Provincial Legislatures to devote public funds, and to encourage private philanthropy, in the establishment of homes or sanatoria in one or more counties or districts of the several States and Provinces, to which tuberculized patients may be sent early, either at their own or municipal expense, and under proper regulations be encouraged to remain therein until recovery shall have taken place; while, at the same time, they shall have prevented the continuance of centres of infection in their homes.

Dr. C. A. Lindsay, Connecticut: I believe that this resolution should be in some way published at once. I do not think it should be held until published in the regular proceedings. I move that the Secretary prepare copies of this resolution at his early convenience and send them to every State and Provincial Board of Health that they may have opportunity to bring the matter before their Legislatures. Motion was seconded and carried.

Book Reviews.

SENN'S GENITO-URINARY TUBERCULOSIS. *Tuberculosis of the Genito-Urinary Apparatus, Male and Female.* By Nicholas Senn, M.D., Ph.D., LL.D., Professor of the Practice of Surgery and of Clinical Surgery, Rush Medical College, Chicago.

This work is one that every practitioner should make himself familiar with. The contents are so arranged that the whole field is covered, and the author has adopted a style that is more suitable to American and English readers, being more concise, than previous efforts of this distinguished author. The work embraces a vast amount of personal clinical experience, together with a very complete review of the opinions of the leading authorities on this subject from all parts of the world.

Dr. Senn has been able to collate the numerous essays and monographs on genito-urinary tuberculosis, and the resulting volume is an undoubted addition to medical literature. It is volumes like this that the profession require and should be appreciated by a liberal subscription. The book undoubtedly fills a niche, and authors who look for these unfilled spots and fill them with such a complete work as this is deserve the thanks and support of the profession.

The typography, paper, and binding are excellent, and reflect credit on the publishers.

DISEASES OF THE NERVOUS SYSTEM: A Hand-Book for Students and Practitioners. By Chas. E. Beevor, M.D. Lond., F.R.C.P., Physician to the National Hospital for the Paralyzed and Epileptic, etc. With illustrations. H. K. Lewis, London, 1898. 10s. 6d.

This recent addition to Lewis's Practical Series will be welcome to students and practitioners. Its objects, as stated in the preface, are: "To enable students and practitioners to know how to examine patients suffering from diseases of the nervous system, and assist them to marshal their facts in definite order, and also to serve as an introduction to the study of the larger standard works on neurology."

Chapter I. is introductory. Chapter II. gives an outline of the anatomy and physiology of the nervous system. Chapter III. is devoted to case-taking. The author prefers the "physiological method," in which each system is taken separately and followed throughout. The motor and sensory systems are then taken up, and a table given of their

normal and abnormal actions. The chapter closes with a description of the general diagnosis of nervous diseases.

Chapter IV. deals entirely with modes of examination, and is a valuable guide to practice. Space does not permit us to follow Dr. Beevor through the body of the work, but his name is a guarantee of its worth. The condensation of a large subject into a small space is well done. The text is arranged so as to bring the salient points into prominence, and nothing new in pathology or treatment has escaped notice.

The collection of plates at the end of the book will be found very valuable as an aid to tracing the sites of lesions.

A System of Practical Medicine. By American authors. Edited by Alfred Lee Loomis, M.D., Late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M.D., Professor of Medicine in the Cornell University Medical College, New York. In four imperial octavo volumes. Volume IV.—Diseases of the Nervous System and Mind; Vasomotor and Trophic Disorders; Diseases of the Muscles; Osteo-Malacia; Rachitis; Rheumatism; Arthritis; Gout; Lithæmia; Obesity; Scurvy; Addison's Disease. 1,099 pages, 95 engravings, and 8 full-page plates in colors and monochrome. For sale by subscription. Per volume, Cloth, $5; Leather, $6; Half Morocco, $7. Lea Brothers & Co., Publishers, Philadelphia and New York, 1898.

The fourth volume opens with a comprehensive article on diseases of the peripheral nerves, by Frederick Finley, of Montreal. Then follows a series of articles on the diseases of the spinal cord, commencing with a really masterly monograph on "The diagnosis and localization of spinal-cord diseases," by M. Allen Starr, of New York. The new light thrown upon the nervous system by the researches of modern physiologists makes the careful study of such articles as this imperative if one would keep in touch with the rapid progress of medicine during the past few years. The diagrams are numerous and extremely useful. Starr also contributes the article on anterior poleo-myelitis. The other contributors to this section are Christian Herter and Edward D. Fisher, of New York, and D. D. Stewart, of Philadelphia. Herter also writes the article on diseases of the medulla and pons. The contributors on diseases of the brain are Eskridge, of Colorado, whose article on localization is useful; Francis T. Miles, of Baltimore; F. H. Dercum, the well-known neurologist of Philadelphia, and Edward Fisher.

The series on the functional nervous diseases is of more than average merit and includes articles on epilepsy, paralysis, agitans and tumors in general, by Peterson, of New York; infantile convulsions and eclampsia, by Edward Fisher; chorea and tetany, by Charles L. Dana; neuralgia and migraine, by W. H. Thompson; neurasthenia, by Putnam, of Boston; occupation neuroses, by Chas. K. Mills, of Philadelphia; traumatic neuroses, by Morton Prince, of Boston; sea-sickness, by W. Gilman Thompson; and hysteria and disorders of sleep, by Wharton Sinkler, of Philadelphia.

The general practitioner will find the series on "Disorders of the mind" extremely useful, and the names of the writers are sufficient guarantee of the excellence of the material. They include melancholia and dementia, by Pritchard, of New York; mania, by Willis E. Ford; paranœa, by Noyes, of the Boston Insane Hospital; general paresis, by Laudon Carter Gray; idiocy and imbecility, by Pierce Bailey; and the sexual psychoses, by Morton Prince.

Our own James Stewart, of Montreal, is the author of an able article on vaso-motor and trophic disorders, which discusses such interesting diseases as acromegalia, Raynaud's disease, angio-neurotic œdema, facial hemiatrophy, scleroderma, and vertigo.

The article on diseases of the muscles is by Frederick Finley.

Finally come a number of miscellaneous subjects which defy classification, viz., osteomalacia, by Finley; rickets, by Jacobi; rheumatism, gonorrhœal arthritis, arthritis deformans, gout, lithæmia, obesity, and scurvy, by Gilman Thompson; and, last of all, Addison's disease, by Warren Coleman.

The fourth volume completes the work. We have discussed its value with several subscribers and all have expressed themselves as well pleased with their purchase. The writers have been chosen on account of their special knowledge of the subject treated, and we can turn to its pages with confidence that we shall there find the latest and best views.

AN AMERICAN TEXT-BOOK OF THE DISEASES OF CHILDREN, including special chapters in essential surgical subjects: Orthopædics; Diseases of the Eye, Ear, Nose and Throat; Diseases of the Skin; and on the Diet, Hygiene and general management of children. By American Teachers. Edited by Louis Starr, M.D., late Clinical Professor of Diseases of Children in the University of Pennsylvania, etc., etc., assisted by Thompson S. Westcott, M.D., Instructor in Diseases of Children University of Pennsylvania, Member of of the American Pediatric Society, etc., etc. Second edition, revised. Canadian agents, J. A. Carveth & Co., Toronto. Price $8 cloth, $9 sheep or half morocco.

This is a handsome volume of 1244 pages, produced in Saunders' best style. The text is illustrated by twenty-eight plates and innumerable cuts. There are sixty-five contributors, including many of the ablest physicians of the United States. There are over one hundred subjects discussed besides the specialties. Each subject is dealt with in a short, concise chapter, full enough for clinical purposes, but from which discursive matter has been carefully excluded. Nothing is omitted, yet everything is concise. The subject-matter is limited to practical points, such as etiology, symptomotology, diagnosis and treatment, including therapeutics, feeding and hygiene. The articles were all written about the same time, so that each one has the same freshness, and the book as a whole is thoroughly abreast with the rapid advancement in this branch of medical science.

New articles in the present edition are on "Modified Milk and Percentage Milk Mixtures," "Lithæmia" and on "Orthopædics." Many of

the other articles in the first edition have been rewritten and many others have been revised, including the articles on Infant Feeding, Diphtheria, Cretinism and Scurvy.

Dr. Blackadar, of Montreal, is the only Canadian writer. He writes on Gastric Catarrh and Ulcer; Osler writes on Tuberculosis, and Dillon Brown on Diphtheria. I am impelled to quote one of Dillon Brown's statements: "Clinically cases of follicular amygdalitis are frequently diagnosed as cases of catarrhal or purulent inflammation when they are really diphtheria. All such cases should be treated as true diphtheria and isolated until such time as the diagnosis can be made with certainty."

In the article on Diseases of the Pharynx and Naso-pharynx, the author—Castlebury of Chicago—distinguishes between an "infectious psuedo-membranous tonsillitis and a simple follicular tonsillitis." In the former the exudate proceeds from the crypts of the tonsil and spreads itself around the margin, covering an area of from two to four millimetres, whereas in the latter the exudate is of the nature of a cheesy pellet which cannot be dignified with the name of pseudo-membrane. The infectiousness of the former depends on different varieties of cocci. Thus the division of pseudo-diphtheria is omitted and the cases are called infectious pseudo-membranous tonsillitis. We believe this to be clinically a better method.

The reviewer has much pleasure in bearing testimony to the value of this book. He believes it to be one of the best, clinically speaking, of the books on pediatrics. The fact that it deals with some essentially surgical subjects makes it more valuable. These are diseases of the eye, ear, nose, skin and of the anus and rectum. Also circumcision, tracheotomy, intubation, venereal disease and other allied subjects.

Books received:

PRACTICAL DIAGNOSIS. The Use of Symptoms in the Diagnosis of Disease. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Third edition, enlarged and thoroughly revised. In one octavo volume of 615 pages, with 204 engravings and 13 full-page colored plates. Cloth, $4.75 net. Lea Brothers & Co., Publishers Philadelpia and New York.

MANUAL OF CHEMISTRY. A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Text-book specially adapted for Students of Pharmacy and Medicine. By W. Simon, Ph.D., M.D., Professor of Chemistry and Toxicology, College of Physicians and Surgeons, Baltimore; Professor of Chemistry in the Maryland College of Pharmacy. New (sixth) edition. In one 8vo. volume of 532 pages, with 46 engravings and 8 colored plates, illustrating 64 of the most important chemical tests. Price, Cloth, $3, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

Medical Items.

Dr. Lapthorn Smith, who has been studying in Europe during the summer, has returned to Montreal. Following the example of the European gynæcologists, he is forming a class (post graduate), limited to six practitioners, each course of demonstration lasting a month.

UNIVERSITY SENATE ELECTION.—The following are the results of the recent election. There were 1,301 ballots cast in arts: Prof. Alfred Baker, 1,118; Mr. Wm. Dale, 1,052; Hon. Sir Wm. R. Meredith, 1,033; Prof. Maurice Hutton, 966; Mr. A. B. Aylesworth, Q.C., 818; Mr. John King, Q.C., 794; Mr. J. L. McDougall, 779; Mr. Wm. Houston, 767; Rev. Prof. Ballantyne, 743; Prof. W. H. Ellis, 719; Prof. A. B. Macallum, 714; Mr. W. H. Ballard, 704. Elected. The other candidates were: Mr. J. H. Coyne, 684; Mr. W. H. Bunting, 683; Mr. Walter Barwick, 525; Mr. W. F. Maclean, M.P., 435. There were 919 ballots cast in medicine: Dr. Jas. E. Graham, 740; Dr. A. H. Wright, 699; Dr. W. H. B. Aikins, 528: Dr. I. H. Cameron, 505. Elected. The other candidate was Dr. James M. McCallum, 481. There were 181 ballots cast in law: Mr. W. R. Riddell, 127; Hon. Mr. Justice Street, 106. Elected. The other candidate was Mr. J. M. Clark, 93. The High School representatives were: Mr. J. Henderson, 246; Mr. H. I. Strang, 245. Elected. The other candidate was Mr. H. B. Spotton, 169. The Victoria representatives elected by acclamation were: Rev. A. H. Reynar, Mr. J. J. Maclaren, Q.C., Rev. Albert Carman, Mr. Henry Hough, Prof. A. R. Bain.

NAPOLEON AS SCHENCK'S PREDECESSOR.

Napoleon's opinion on the determination of sex was less prolix and more easily followed than the present theory of Dr. Schenck's, with which we are all familiar, if we may judge from a letter dated August 31, 1806, addressed to the Princess Augusta, the wife of Prince Eugene. In this epistle the emperor advises his sister, who was then in an interesting condition, to take good care of herself, and adds: "Try not to have a daughter. I will give you a receipt to this end, but you may not believe in it; that is, drink water and wine daily." This receipt is simple and much easier to follow than Dr Schenck's. It appears, however, that it is either not infallible or else the princess did not follow it, for she had a girl.—*Le Nord Medical.*

OBITUARY.

ANDREW FISHER, M.D.—Dr. Fisher, of Amherstburg, one of the oldest and most highly respected physicians of Western Ontario, died, September 28, after a short illness from pneumonia. He became a Licentiate of the Old Medical Board of Upper Canada in 1854, and received the degree of M.D. from the University of New York in 1855.

R. T. CORBETT, M.D.—Dr. R. T. Corbett, of Port Hope, was killed at Duck Harbor, near Port Hope, October 6, 1898. He went out in the afternoon of that day with a friend on a hunting expedition. It seems that he was on the railway track and, noticing an east-bound freight train, got out of the way. After it passed he went again on the track without looking in the opposite direction, and was struck by a west-bound train with the result that he was instantly killed. Dr. Corbett graduated in Trinity College, Toronto, in 1893, and, as a student, gave promise of future success. After completing his course he practised in Port Hope, and had already acquired a good reputation as a conscientious and skilled physician when death cut him off in such a sad way. He had been married only a few months before to Miss Mackie.

HAROLD HEBER HAWLEY, M.D.—Dr. Harold Hawley, of Trenton, was one of the brightest young physicians. He received his medical education in Trinity Medical College and received the degree of M.D. from Trinity University in 1885. In his undergraduate days he and his friend Logan were considered the best students in the school, and captured most of the prizes. At the final examinations Hawley won the Trinity Medical College Gold Medal, while Logan took the University Gold Medal. We deeply regret that we have to announce the death of Dr. Hawley, which occurred at Algonquin Park, October 4, after a short illness from pneumonia. After graduating Dr. Hawley practised for some years in Colborne and Trenton, and about one year ago went to Canoe Lake in Algonquin, where he acted as surgeon to the Gilmour Company, who had large mills at that place. The remains were brought to his home in Trenton and buried October 6. Our readers will probably remember that we announced the death of Dr. Logan a few years ago.

THE

CANADIAN PRACTITIONER

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PUBLISHERS:
THE PRACTITIONER PUBLISHING COMPANY,
TORONTO.

VOL. XXIII.] NOVEMBER, 1898. [No. 11.

Original Communications.

SOME NOTES ON ROSACEA, WITH SPECIAL REFERENCE TO ITS TREATMENT.

BY GRAHAM CHAMBERS, B.A., M.D.

Lecturer in Dermatology, Woman's Medical College; Dermatologist, St. Michael's Hospital, Assistant Physician, Toronto General Hospital.

Rosacea may be defined as a chronic disease of the face, characterized by red patches due to a paretic condition of the blood vessels and, in addition, in some cases by papules, nodules and pedunculated growths due to hypertrophy of the connective tissue of the skin. The disease is frequently complicated by acne vulgaris, but the latter affection is always secondary, due to infection of the sebaceous glands by pus germs. Therefore, the mixed term, acne rosacea, which is generally applied to the disease, should be dropped and replaced by rosacea. The disease does not occur before puberty and is rare up to the age of twenty-five. From then

onward it is very common and, with the exception of acne, is the most frequent of the diseases which occur upon the face. In the great majority of cases, the lesions of rosacea are situated on the central portions of the face, forehead, chin, nose and adjacent parts of the cheeks. In rare cases, however, the whole of the face with the exception of the orbital regions, scalp and the neck becomes seats of the disease. The reason why the disease attacks these regions in preference to other parts of the body probably depends upon the facility with which the vessels of the face are paralyzed.

The clinical manifestations of rosacea undergo considerable variation in the course of the disease as well as with the sex, habits and occupation of the patient. These changes are so marked that we can very well distinguish three forms, viz.: Non-hypertrophic. hypertrophic and seborrhœic. Naturally these types are not sharply defined but are frequently associated or shade off into one another,

The non-hypertrophic or maculate form of rosacea occurs in both sexes, but more frequently in women than in men. The disease, as a rule, is very gradual in its development and is characterized at first by temporary congestion of the face, and particularly of the nose, after partaking of full meals, hot drinks, or alcoholic stimulants. The condition in the female is sometimes more marked at the monthly epoch or during pregnancy. After the lapse of months, and sometimes years, unless the cause is removed, the congestion gradually becomes more lasting until permanent hyperæmic red patches result. The intensity of the color undergoes considerable variation from time to time, depending upon the condition of the stomach, weather, etc. In addition to the abnormal color, the affected parts generally have a greasy appearance, due to an excessive formation of sebum. The sebaceous glands may become infected by pus germs, giving rise to an acne which adds to the disfigurement of the face. These conditions do not exist long on the face before some of the dilated vessels of the red patches become visible to the naked eye. This represents a higher grade of the disease. Sometimes cases present themselves where vessels on the nose are dilated, but the intervening skin is nearly normal in color. This type occurs more frequently in men than women, and is said by some authorities to be due to exposure and to imbibing of strong spirits.

Seborrhœic rosacea is only a special type of seborrhœic eczema, which invariably commences on the scalp. The paresis of the vessels in this form of rosacea probably not only depends upon this chronic infectious dermatitis, but also to a certain extent upon reflex stimuli from some systemic disturbance. These lesions frequently

commence in the sweat groves on each side of the nose and gradually advance upon the alæ. Sometimes, however, they are found in multiple patches on the nose and adjacent parts of the cheeks. Scaling of the parts is never so well marked as in lesions of seborrhœic eczema on other parts of the body.

The hypertrophic form of rosacea, which is a higher grade of the disease than the two preceding types, is due to a hypertrophy of the connective tissue, and in some cases of the sebaceous glands of the affected parts. In many of these patients the breadth of the nose is increased, whilst the surface of the skin is mammilated in outline and pitted with the dilated orifices of the sebaceous glands. The chin and forehead may present a similar appearance, but never developed to the same extent. In other cases the diseased parts present solid papules and nodules, principally made up of connective tissues. As this process advances, the nose becomes irregularly enlarged and lobulated, and the most misshapen deformity may result. Cases have been recorded where the nose attained the size of two fists and weighed as much as two pounds. The term rhinophyma is applied to these extreme developments. Fortunately they are very rare.

Treatment. As rosacea is more or less a symptomatic affection, being only one sign of many morbid processes, it is very important that the causative agents in each case should be made out. This is particularly true of those cases which result from systemic disturbances, for, even if we effect a cure by external agents, the case is very apt to relapse, provided the cause of the disease is not removed. Before commencing treatment we should, therefore, make a thorough examination, not only of the food, beverages, and habits of the patient, but also of the condition of the alimentary tract, and, in the case of women, of the organs and functions peculiar to themselves. Each of these conditions should be treated according to its nature. This is too wide a field of therapeutics to discuss in a paper such as this, but I shall mention some of the most important rules which should be followed in the treatment of the disease. The diet should be regulated, and the food should be of the plainest, and of a non-fermentable character, and should vary with the condition of the stomach and intestines. All alcoholic liquors, whether malted, fermented, or distilled, should be prohibited until, at least, a cure is effected, and then if any is allowed it should not be habitually used. Undiluted strong spirits and highly acid wines are particularly injurious. Tea, particularly if strong and improperly made, is harmful, whilst coffee is generally

permissible. Constipation, which is frequently present, should be corrected by a saline or vegetable laxative. Although internal medicinal remedies should, as a rule, be administered on a rational basis for the cure of the condition which is primarily the cause of rosacea, still there are certain drugs which appear more efficacious than other members of their class in effecting a cure. Strychnine is one of these, and I believe that full doses of it will prove of value in every case of rosacea. It probably acts by giving tone, not only to the gastric and intestinal muscles, but also to the paretic blood vessels. Ergot is another remedy which is very useful in a number of cases of this disease, particularly in women. It appears to me to be most useful in those active cases where the lesions are situated on the chin as well as on the nose and other parts of the face. Resorcin and ichthyol are remedies which have great reputations in the treatment of this disease, and I cannot speak too highly of their use in certain cases where there is fermentation or putrefaction of food in the stomach, and small intestines, due to bacteria. Both these remedies are best administered in three or four-grain capsules immediately before or after eating. Marked improvement, not only of the general condition of the patient, but also of the rosacea, frequently follows their use. Of these two medicinal agents, I generally select ichthyol, expecting to reap some advantage on account of the large percentage of sulphur which it contains. There are many other internal medicinal agents—such as silver nitrate, belladonna, sodium bicarbonate, etc.—which are frequently necessary in the treatment of this disease, but the indications for their use depend upon the nature of the digestive disturbance.

The external treatment of rosacea should be adapted, not only to the form and grade of the disease, but also to the irritability of the skin in each particular case. In order that I may be more explicit, I shall separately describe the local treatment of the three principal forms—non-hypertrophic, hypertrophic, and seborrhœic.

For the management of the non-hypertrophic form, uncomplicated by easily visible vessels, we depend principally upon the topical application of drugs. The medicinal agents indicated in this disease are those that are antiseptic, keratoplastic and capable of giving tone to the paretic blood vessels. The term keratoplastic is applied to those chemically reducing agents which increase the firmness and dryness of the corneous layer. Resorcin, sulphur, ichthyol, chrysarobin, pyrogallol, formaline, in certain strengths of preparation, belong to this class, and are, at the same time, antiseptic and are more or less tonic in their actions. Chrysarobin and pyrogallol

are rarely used on account of the pigmentation which they produce, and, in addition, chrysarobin is very apt to set up an intense erythema, which is objectionable, particularly on the face. Formaline has a very strong keratoplastic action, but I cannot speak of its usefulness in this disease. Ichthyol is a very useful but a very dirty drug, and can only be used at night unless the patient gives up his avocation. I frequently use a ten per cent. ointment as a topical application during the night. Resorcin and sulphur, however, are two drugs which have few disadvantages, and, according to my experience, the most useful agents we have in the treatment of this disease. The strengths of the preparation should not be too great for fear of setting up too intense an irritation and getting the opposite result to that required. It is, as a rule, best to start with a weak preparation, and then adapt the strength to the irritability of the skin. There are many methods of applying these drugs, but, according to my experience, I have found the following formulæ to be the most satisfactory way of prescribing :

Sulphur, grs. xx.
Resorcin, grs. xxx.
Vaseline, ℥i.

This ointment should be rubbed on the affected parts at bed-time. In the morning the parts should be washed with soap and water and then the following lotion applied :

Resorcin, ℥iss.
Spirits vin. rect.
Aquæ, aa ℥ii.

This treatment at first may increase the redness of the parts, but as a rule in a few days the skin appears to become accustomed to the preparations and then frequently the hyperemia is lessened. If the irritation is too severe, the treatment should be suspended and cold cream applied for a day, when it will be found that the reaction has subsided. In some cases the percentage of resorcin in the ointment must be increased to produce the desired result. In those cases of rosacea associated with marked telangiectasis, it is necessary in most cases, before adopting the foregoing treatment, to obliterate the plainly visible vessels. This is best effected by scarification. The part should be numbed by the application of ethyl chloride or a mixture of ice shavings and salt contained in a muslin bag and then transverse incisions about a line apart should be made along the course of the vessel. The operation is best performed at several sittings. The bleeding can be controlled by compression,

or, if necessary, by the application of liq. ferri. perchloride. Sometimes it is better to slit up the large vessels with a narrow bistoury and then apply the above solution of ferric chloride. The treatment of some of these cases is very tedious, as the obliteration of the vessels appears to cause a dilatation of collateral branches. Electrolysis is another excellent method of rendering the dilated vessels impervious. A fine needle attached to the negative electrode should be horizontally introduced at different points along the course of the vessel. A weak current, just sufficient to cause the clotting of blood, should be used. The cicatrizes produced by either of these methods of destroying the vessels are rarely perceptible to the naked eye.

Seborrhœic rosacea should be treated in a similar manner to the foregoing form. Resorcin and sulphur are particularly indicated, as they are used in all types of seborrhœic eczema. The application should be made not only to the hyperæmic patches on the face but also to all parts where the seborrhœic process exists, so as to completely eradicate the whole disease. It is best, as a rule, to commence treatment with strong applications, in order to cause free exfoliation of the epidermis. My favorite prescription for this purpose is an ointment containing 10 per cent. of sulphur and from 10 to 25 per cent. of resorcin, according to the irritability of the skin. Frequent rubbings with tincture of green soap and water, will assist in bringing about the desired result. This method of treatment is disagreeable to the patient, but is necessary to remove the bacteria from the follicles and to increase the tone of the vessels of the skin. It should be continued for about a fortnight and then milder applications of reducing agents ordered. When the irritation produced by the strong applications has subsided, marked amelioration of the hyperæmia is to be expected. Sometimes, again, it is necessary to resort to the strong preparations before effecting a cure.

The local treatment of the hypertrophic forms of rosacea varies, not only with the appearance, but also with morbid anatomy of the diseased part. In those cases where the nose is broadened and its surface pitted with the dilated orifices of the sebaceous glands, strong decorticating agents give the best results. There are many preparations recommended for this purpose, but I have found that a strong paste containing about six per cent. of salicylic acid and from thirty to forty per cent. of resorcin is the most satisfactory method of prescribing. When this preparation has been applied for a few days an intense irritation is set up, and this is quickly followed

by an exfoliation of the outer part of the epidermal layer. I now order a mild keratoplastic ointment until the irritation has subsided, when the decorticating plaster may be again applied. This method of treatment is at first very disagreeable to the patient, but if persevered with will always diminish the redness and hypertrophy of the part ; when the hypertrophy is principally due to an increase in the connective tissue the topical application of drugs has very little effect and the treatment depends upon ordinary surgical procedure.

18 Gerrard St. East.

WHEN SHOULD WE OPERATE?*

By Wm. Oldright, M.A., M.D.,

Surgeon to St. Michael's Hospital and Associate Professor of Clinical Surgery in the University of Toronto.

In common with other surgeons I have met with so many persons whose condition would have been much improved by early operation, and many in whom it is not yet too late, that it appeared to me a paper and discussion with the above heading would fill a useful place in our annual review. With our improved and constantly improving surgical technique the good results and prospects are so increased that we observe a much greater number of cases favourable for operation. Then there are on the other hand cases not suitable for operation or where operation is either unnecessary or contra-indicated. To the conservative honour of Canadian surgeons be it said that operations in such cases are extremely rare.

The time for operation in cases of appendicitis, and the wisdom of operating in recurrent appendicitis as soon as the tendency to recurrence has manifested itself, has been fully discussed by other members of this association. I will therefore merely show in this connection four specimens from two patients ; from one a sloughing appendix and a fæcal concretion, a stone of laminated construction. The other two specimens, an appendix and an inflamed tube and degenerated ovary from a girl of nineteen who had repeated attacks of pain in various parts of the abdomen, sometimes accompanied with vomiting and purging. The most common and constant seat of tenderness was in the right iliac region and an elongated corded mass could be detected by pressure in that region, extending from McBurney's point towards the fundus of the uterus. Whilst inspecting the appendix I could not be certain that the ovary or tube or both were not involved, and consequently would not operate without having received the authorization of the girl's parents "to perform such surgical operation as I consider necessary to give her permanent relief." The sequel as shown here is evidence of the necessity of

* Read before the Ontario Medical Association June, 1898, and illustrated by the presentation of patients and pathological specimens.

such precaution. The operation was done two weeks ago to-day.

Other members of the association have also recently discussed the necessity of freeing patients from the pain and danger of pyosalpingitis. I therefore merely add fresh testimony to these remarks by presentation of a pair of tubes removed a few weeks ago after some months of oft-recurring pain and wretched health. The patient has one baby six months old. In these tubes the pus was inspissated.

There is another class of cases which, though well known in abdominal surgery, has not been so fully brought forward and discussed at our meetings, the differential diagnosis of which deserves more consideration, and, if properly followed up by operative treatment, may save the patient from great risk as well as much suffering. The history of a case will best illustrate this class. Mrs. S. had been married five years; had no children. I was sent for in March of this year on account of a sanguineous flow, accompanied by spasmodic pain in the hypogastrium, thought possibly to denote miscarriage, the patient having gone somewhat over her periods. Palliative treatment proving of no avail and hemorrhages recurring, it was decided to dilate the canal and curette the endometrium. Tenderness had been detected outside and to the left of the uterus. This might be caused by extension from the uterus, but a history of pain in the iliac fossa before and since marriage was elicited; these pains had been increased by walking. The hemorrhage recurred, and one day I was summoned hurriedly on account of a sudden and severe onset of pain in the left inguinal region, which had almost subsided before I arrived, half an hour or so after the onset. A slight bloody discharge existed. My belief that there was a recurrent hæmato-salpinx with stenosis of the mouth of the tube was now confirmed, and I pointed out to the patient that she might at some time have a dangerous intra-peritoneal hemorrhage from rupture of the tube. I therefore advised that she avoid this danger and rid herself of suffering by a removal of the appendages on that side, at the same time asking consent to remove them from both sides if necessary. This was reluctantly given, as the patient's parental desire was very strong. On examining the specimen you will see that what was pointed out as a probable result in the future was a present reality—the tube had ruptured. The clot which is presented was found walled in along with the tube and ovary by adhesions in the posterior pelvic fossa. The right tube was found stretched backward, its fimbriated extremity buried in an adhesion of intestine to the pelvic wall.

In contrast with this case, caught and operated upon before pro-

fuse hemorrhage had occurred, I may cite three other cases: One where I was called in consultation to see a patient in a very weak condition, with a large tender mass in the pelvis, and from whom in operating I removed over two quarts of clot and serum (part of the latter effused from the peritoneum, I presume). This patient presented a history very similar in its commencement to the other: Married several years; no children; recurrent attacks; at last this very severe one occurred. Although she made a good recovery she gave us a bad quarter of an hour, being taken pulseless from the table and having to be kept up by large quantities of saline solution injected into the cellular tissue and rectum. The first was a more comfortable case for operation and illustrates the best time "when we should operate."

One of the other cases was similar but more chronic. The meshes of the omentum were invaded by semi-organized clotted masses, on account of which a portion of omentum was removed, and we had an abdominal fistula in the track of the drainage tube. A good, but slow, recovery ensued. The last to which I shall refer is a case of double hæmato-salpinx, the tubes having been immensely distended. The pains from the recurrent attacks appeared to be very excruciating.

In none of these cases was there any sign of an embryo. Only the last recited had borne children.

It goes without saying that in cases of malignant disease operation should be on the earliest recognition of the disease. The early recognition then is of the greatest importance. Two cases will illustrate a method of procedure in doubtful cases. I was asked to see in consultation, a year and a half ago, a widow whose baby was two years old. She had a suspicious lump, somewhat flattened, in the right mamma, and an enlarged gland in the axilla. Neither was hard enough to warrant a positive diagnosis of carcinoma. After consultation we determined to prepare for Halstead's operation, but in the first place to excise the small mass in the breast, cut into it after removal, and, if not satisfied of its malignancy, to close the wound and defer the more extensive operation until a microscopic examination had been made. On removing the mass all those present, including one of our pathologists, considered it very innocent looking. To my surprise the microscopic examination showed carcinoma. The complete operation as described by Halstead speedily followed. The result so far is satisfactory, though only half of Halstead's allotted three years has yet elapsed. In a case six weeks ago in an unmarried woman, a similar mass and

larger, harder glands presented themselves. Here one of the glands was removed, the afferent and efferent ducts being ligated and carbolized. Macroscopic examination pointed to tubercle. Microscopic examination has confirmed this view, and a needless extensive mutilation has been avoided. I was glad to come across an article in a number of the *British Medical Journal* just after the occurrence of the first mentioned case, in which a prominent surgeon of St. George's Hospital, London, recommends that course of action. It would be much better not to have to make this exploratory wound if one could always be sure; but it is better to make it than to wait. In contrast with cases of this kind one can point to some which have been too late because of rapid growth and too long delay, and also happily to others where certainty of diagnosis, slow growth, and rapid decision of the patient have yielded the satisfactory result of no return. One such case is now entering its fourth year, the patient being over seventy years of age.

Better operate early, even if you have to make an exploratory one, than to wait until it is dangerously late.

I would now show you two cases of so-called gonorrhœal rheumatism—infective synovitis, if you prefer the term. In one aspiration was done early, followed by rest, Churchill's tincture and immobilization, the aspiration being repeated once and the immobilization being kept up for three weeks or more—until the effusion ceased. The other case had been tapped once, but when it came to me it was in such bad shape that I had to open the joint, cut out a lot of rice-bodies, thickened synovial membrane, and some spiculæ of cartilage. In passing I may say that Oppenheimer's astragulus knife, which I pass around, is useful in many such removals of bony and cartilaginous projections. Great improvement and relief followed this operation, but it appears to me that had this man kept himself under surgical oversight in the earlier years of his trouble he would have been better off now.

I next present to you a patient whose great toe over-rode the two next adjoining. I removed from the first metatarsal bone a transverse wedge-shaped piece, the base of the wedge being towards the inner surface (inner anatomically—the free surface of the foot). This allowed the toe and metatarso-phalangeal joint to be forced over into a straight position, and the edges of bone were united with a silver-wire suture. I considered it better in this way to save the joint (which was not diseased) from excision.

This little boy, whom I next present, was operated on six weeks ago by division of the tendo achillis. I pass around photographs

showing the condition of his foot before operation. As there is a special paper on this subject I will not enlarge upon it, but would merely draw your attention to the want of development in his leg; it is partly congenital I think; he has no testicle, or only an apology for one, on that side. However, as regards the leg, I think we are safe in saying that had he been operated on six years ago instead of six weeks ago he would have a better one to show you on the right side.

The last patient I shall show you is this man who had an abscess in the lower border of the axilla. From neglect, largely his own, it closed after being opened, and it extended inwards on the thorax, the pus passing beneath the ribs, shoving the pleura in front of it. When I opened it I found 6 inches of the third rib and costal cartilage denuded of periosteum and 2 or 3 inches of the fourth. The interesting point is that all this bare bone was covered in by granulations and retained its vitality. The patient gained 50 lbs. between October and April. Some sinuses remained, and about five weeks ago I cut down and removed some portions of rib so as to curette the abscess wall below this. I pass these pieces of rib around and you will see that they were living bone when removed, and you will also see the toughened tissue which replaced the original smooth periosteum. Early attention would have saved this man much loss of time and much suffering.

I shall lastly pass around this photograph showing a large hernia which should have been operated on years ago. This patient recently came under my notice on account of other ailments, and the condition of liver and kidneys is now such as to preclude any operation where an anæsthetic would be needed.

There are plenty of men and boys going about with incomplete make-shifts in cases of inguinal hernia. The results now obtained are such that we ought to advise operation except in some of the rare cases of children, when a truss may be given a fair trial, and if it fails the operation should be resorted to. The statistics, as given in Sajou's Annual for last year and the American Year-Book for this year, are from 90 to 95 per cent. of permanent cures, according to Coley and De Garmo.

I may say, in passing, that during the past year not only in herniotomies, but in making good the wall after abdominal section, I have used kangaroo tendon put up in alcohol in hermetically sealed tubes. This suture is most useful in uniting seriatim the various layers of muscle and fascia, and I have not had one case of deep-stitch abscess from them. I do not care, as a rule, to men-

tion makers' names, but, as there has been disappointment in the use of kangaroo tendon in carbolized oil, etc., I may repeat that the tendon thus used is put up in alcohol in the hermetically sealed Fowler's tubes. Besides the advantage that this method has, in restoring the anatomical structures layer by layer, there is this additional one, that there is less strain on the outside integumental stitches (for which I use silk-worm gut), and that these can be removed early, and that they do not leave an avenue for the pus in the little integumental stitch-hole abscesses to find their way down into deeper structures.

This paper has grown to such length that it has filled the time allotted to me, and I cannot, therefore, take up the other side of the question, that of cases unsuitable for operation or where operation is not justifiable.

Trusting that I have not already wearied the members of the association in wandering over the field of general operative surgery, I thank you for your attention.

THE PRESIDENT'S ADDRESS.

By A. Primrose, M.B., C.M., Edin.,

Professor of Anatomy and Associate-Professor of Clinical Surgery in the University of Toronto

Gentlemen,—I have to thank you most heartily for the honor you have done me in electing me President of the Pathological Society of Toronto. Ten years ago Dr. John Caven suggested the formation of this Society, and I assisted him at that time in drawing up a list of those whom we thought sufficiently interested in the study of pathology to become active members. During the last decade we have had an enormous addition to our knowledge of morbid anatomy. Improved methods of research have facilitated laboratory work, so that many new and important discoveries have been made. I think we may congratulate ourselves that this Society has been of real service in helping us, to some extent at least, to keep abreast of the advances made in the study of pathology. We have accomplished a large amount of work during the last ten years, and I am quite certain it has proved of great value to those members who have taken part in our proceedings. There is more of a scientific spirit abroad among the profession in our country than there was a few years ago. Practitioners are no longer satisfied to become pure empirics; they wish to study the etiology of disease, and to become familiar with the life history of morbid processes. There are yet to be found men who shape their practice wholly from the results obtained by them in their experience, who are fond of publishing the large number of cases, of this or that category, which have come under their care. From these records, and from these alone, they draw their conclusions and play upon the credulity of the public (both in the profession and among the laity), suggesting that one's efficiency and attainments as a practical man are to be measured by the number of "cases" which he can tabulate and present for inspection. Far be it from me to underrate the value of experience, but it is obvious, without further discussion of the subject, that the man who tempers his experience at

the bedside with a knowledge gained by work in the laboratory will be a far better man—more skilful and more trustworthy than the man who accumulates a large amount of experience without any knowledge of the pathology of disease. Fortunately this ancient empiricism is becoming unpopular, so much so in fact that men are compelled, in spite of themselves, to study pathology and to reap the benefits which result. Our Society has gradually become more and more appreciated among the profession in this city ; we have had large additions to our membership, and doubtless not a few will join us this year. The Society is progressing, and will continue to fill a sphere of ever-increasing usefulness.

The men who are destined to become the leading surgeons and physicians of the day are those who are spending or have spent what we may call a post-graduate apprenticeship in the laboratory. The men who are able to settle down and wait for practice in the overcrowded centres have the best chance of fitting themselves for positions of honor in our profession—men who are forced to spend years in waiting before they have acquired a large practice. If such men have the ability, the patience, and the determination to devote themselves to scientific work during the period intervening between undergraduate days and the time when they have become busy practitioners, their perseverance will amply repay them, and they will be able to occupy a position in their profession for which they would otherwise be unfitted. One of the first British surgeons of to-day once told me that he was eleven years in practice before he could pay his house rent out of the proceeds of his practice, and if we enquire into the manner in which that man spent his time during the waiting period we will find that his work was chiefly in the laboratory, and that he made many important contributions to our knowledge both in pathology and bacteriology. To-day he is one of the most eminent surgeons practising in London, and has an extensive practice, and enjoys the confidence of the profession the world over. This is the type of man we look to for important work in the department of pathology, and we believe that this Society affords an excellent stimulus for the development of such work. Men who are looking forward to practice whilst engaged in laboratory work are most likely to develop the more practical side of scientific study and investigation, and to accomplish work which will be of real value when applied to the treatment of disease.

Cohnheim tells us that the " Progress of pathology is historically this : the recognition of a multitude of individual diseases or

special pathology preceded the doctrine of disease or general pathology, and the latter has risen only on the foundation of the former," and this history, one may remark, is ever repeating itself, for the fundamental principles of general pathology are constantly being revised in the light of modern discoveries made in the research laboratories. For example, how different is the present account of the process of inflammation from that which obtained in the light of our imperfect knowledge of a few years ago. We must admit that pathology owes much to the progress made in other sciences. For example, the biological researches of Pasteur in the department of *Biology* were utilized by Lister in elucidating the etiological factors which had to be combated in the practical treatment of inflammatory processes. Again, a vast amount of research work is now carried on in investigating the *chemistry* of the cell in health and disease ; in fact, this department of research work is becoming so developed that it has been predicted that the pathology of the future will be chiefly chemical. In the co-related science of *bacteriology* we see enormous development and a host of investigators are adding greatly to our knowledge of the life history of these living organisms and their significance in disease. In surveying this vast field of scientific work one is forced to ask the question as to how it is possible to utilize the large amount of accumulated knowledge for the benefit of mankind. The Pathological Society affords us a means of accomplishing this, in a measure, satisfactorily. A large section of our membership is composed of men who are devoting their time to the investigation of disease at the bedside ; as scientific practitioners they are anxious to prove the truth or falsity of doctrines which emanate from the research laboratory. We have, again, among our membership men who are engaged almost exclusively in laboratory work. Thus we have the means of discussing the problems which present themselves from entirely different standpoints, and we thus utilize the mass of material at our disposal to the best possible advantage.

It has occurred to me that a suggestion might be made as to a somewhat new departure which might be of service to us in the study of pathology in this Society. We are apt to appreciate too greatly and to place undue value on that which is new or possibly unique in conditions presenting themselves for discussion. Would it not be highly instructive as well as most interesting if some of our members during the present session would give us some historical accounts of the development of our knowledge which has gradually led us to our present conceptions as to the etiology of certain diseases, or as to the progress of certain diseases as determined

by histological study. From this historical standpoint the etiology, for example, of cancer, of tuberculosis, erysipelas or diphtheria would be of extreme interest, whilst the history of the gradual development of our knowledge of the histological pathology of these diseases and its significance would also be of great use as a practical study.

As our work is intensely practical in this Society I think it would be unwise to detain you further. We have a long and interesting programme for this evening, and I think one can safely predict that you shall have, at each meeting throughout the session, similar opportunity for instructive work.

I am sure the officers of this Society may rely upon the support they have always received in the past, from the individual members, in carrying on the work of the Society satisfactorily.

Clinical Notes.

A CASE OF SEWING NEEDLE IN THE LIVER REMOVED BY OPERATION.

By Geo. A. Peters, F.R.C.S. England,

Associate Professor of Surgery and Clinical Surgery, University of Toronto.

THE patient was a child eleven months old, under the care of Dr. Sheehan, of St. Catharines. On Tuesday evening, Oct. 25th, 1898, the mother was fondling the child and pressing him to her breast, when he suddenly cried out with pain, and continued screaming for some time. The mother did not know at the time what the cause of the pain was, but afterwards remembered that she had had a needle in her bodice and then discovered that it was absent. A few hours later the grandmother noticed on undressing the child that there was a spot upon the underclothing just over the region of the liver, and also a small red punctiform discoloration over the region of the right rectus muscle, near the middle line. It was then surmised that the needle had entered through this wound. Next day the child was shown to Dr. Sheehan, who could feel indistinctly the end of the needle through the right rectus muscle. He brought the child over to St. Michael's Hospital and placed him under my care. At time of admission the liver moved up and down with each respiration, and a short way from the punctiform wound of the skin a somewhat pointed body could be felt, which seemed to be tilted at each respiratory movement. With Dr. Sheehan's assistance I cut down upon this on Thursday, 27th October, two days after the needle had entered. On cutting through the skin and muscle a small amount of œdema was found in the deeper layer of the sheath of the right rectus muscle, but diligent search failed to discover the needle, either to the eye or to the touch. The peritoneum was accordingly opened, and at a point just above where the opening was made an adhesion was discovered binding the liver to the

abdominal wall and preventing free movement in respiration. Without disturbing this adhesion the dissection was continued down through it, and the needle was found almost buried in the liver, but with its eye just within the sheath of the right rectus muscle. The needle pointed in a direction backwards, upwards and to the right, and was buried in the liver with the exception of the extreme butt end, as above mentioned. It was removed readily, and found to be black in color, but smooth. The wound was stitched up without drainage, healed by first intention, and the child left the hospital on the sixth day. The needle was an ordinary steel sewing needle, one and a-half inches long. In regard to the diagnosis in this case, it may be remarked that the mother missed the needle and drew Dr. Sheehan's attention to the drop of blood and the punctiform wound in the skin. When first seen by Dr. Sheehan the amount of inflammatory lymph thrown out was not large, and consequently the end of the needle was felt, though not by any means distinctly. The value of the X-rays in such a case is somewhat problematical. In the first place, the body is so small, and the movements of the liver and abdominal wall are so constant and so excursive, that at best but a blurred image could be obtained. Moreover, without a double picture, one taken from the side and one from before backwards, no very adequate idea of the depth from the surface could be obtained. The presence of the wound was in itself of course a much better indication of the position of the body. The method lately introduced of taking a stereoscopic X-ray picture is an enormous advance upon the original single picture, as it gives a view of the body in excellent perspective.

In regard to the question of the advisability of removing such a body, while it cannot be disputed that such bodies may become encapsuled and give but little trouble, all will agree that they are better out than in.

Progress of Medicine.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to the Toronto General Hospital.

ASSISTED BY

H. T. MACHELL, M.D.,

Surgeon St. John's Hospital and Physician to Victoria Hospital for Sick Children.

The following reports are taken from the Annual Report of the Rotunda Hospital:

Induction of Premature Labor.

Premature labor was induced in three cases—twice for contracted pelvis, and once for cardiac disease. In all three cases Krauze's method, the introduction of bougies, was used. It was successful in two cases, but in the third, that of cardiac disease, the bougies failed to bring on labor, although inserted twice.

Ten laminaria tents were then placed in the cervix, but, as they also failed to bring on labor, bi-polar version was performed, and a leg brought down. The child was born alive, but died in thirty minutes. The other children went out well. In every case convalescence was normal.

There were eight cases of accidental hemorrhage admitted. In four of these, as the patient was in strong labor and the first stage well advanced, rupture of the membranes was found to be sufficient treatment. In three cases, however, the hemorrhage was so severe that the vagina had to be plugged with boiled cotton-wool—after the usual aseptic precautions had been taken—and a tight abdominal binder with perineal band applied, to check the hemorrhage and bring on labor.

In every case the mother made an uninterrupted recovery; but in those cases in which plugging had been performed the children were still-born. In these cases the hemorrhage was so severe that in all probability the placenta had been completely detached. One

patient only had a temperature of or above 100.8° F., and this, which she had on admission, fell the second day, and the puerperium continued uneventful.

From our experience of the treatment of accidental hæmorrhage, where the bleeding is severe and labor pains are absent, we are convinced that the firm application of the vaginal plug, combined with the use of a tight and carefully applied abdominal binder, with perineal band, is the only treatment that we can recommend with any confidence.

Eclampsia.

One case of eclampsia was treated during the year.

Case.—The patient, M.G., aged eighteen, 1-para, was admitted on October 4th, 1897, when seven months pregnant. Her urine was scanty and highly albuminous, with considerable œdema of the lower extremities. She also complained of temporary loss of vision, and was very irritable and excited. She was given, at 6.50 p.m., on day of admission, gr. ½ morphia hypodermically; as the excitability continued, and as she had had two typical eclamptic seizures, she was given at 10 p.m. same evening gr. ¼ morphia, which was repeated at 10.30 o'clock p.m. As a purgative, Mist. Sennæ Co. was administered shortly after admission, and, as this did not act, croton oil ii. minim was given, with satisfactory results.

After the last hypodermic of morphia the patient was almost maniacal for several hours. She gradually became quieter, and finally fell asleep, and slept the whole of the next day. After this she rapidly improved, and three days after admission labor set in naturally, and she delivered herself of a living child, weighing 3½ lbs. Her temperature rose to 101° F. on evening of third day after delivery, and was 100.8° F. next evening, but after a uterine douche it fell to normal, and remained so.

During the first twenty-four hours in hospital she only passed ℥xiv. of highly albuminous urine, which increased to ℥xxi. during the next twenty-four hours, and to ℥lviii. during the next twelve hours, remaining at about ℥l. every twelve hours for three or four days following. It was frequently examined, and during the puerperium the amount of albumen rapidly diminished, there being only a trace of albumen in it the day she was discharged.

Patient and child left the hospital on eighth day after delivery, and were seen at the hospital six weeks later, both perfectly well.

NEGLECTED SHOULDER PRESENTATION WITH RUPTURE OF UTERUS.

M.D., aged thirty, 7-para. Delivered April 6th, 1897. Neglected shoulder presentation, complicated with rupture of uterus. Full time pregnancy. Decapitation. Patient, who was of very intemperate habits, complained of having received a severe kick on the lower part of the abdomen on evening of April 4th; during the following two days she sent on three occasions to the hospital, but not until the third occasion would she allow of any examination whatsoever. She had then been in strong labor for five and a half hours, with severe pain in the hypogastrium; a hand was seen protruding from the vulva, the membranes being intact. The extern maternity assistant, Dr. Lyle, was sent for, and, on arrival (the membranes having in the meantime ruptured), examined the patient under an anæsthetic, and, finding the shoulder well down in the pelvis with the uterus tightly contracted down on the child, refrained from any interference, but sent for Dr. Wilson, the Assistant-Master on duty.

The child was lying in an oblique position, dorso-anterior, with head to right; the left shoulder was firmly fixed in the pelvis, with corresponding hand and forearm protruding at the vulva; all the ribs of left side were easily felt bulging down into vagina. On passing hand into uterus that organ was found ruptured on right side; the greater part of head, however, was held within the uterus by the impaction of the shoulder; the intestines could be felt with the tips of the fingers; the umbilical cord was flaccid and pulseless.

Decapitation was performed with Braun's blunt hook; after which the body of the child was easily delivered by traction on the arm, and the head by pressure on the fundus, with the left hand guiding it, in order to protect maternal soft parts.

The placenta was removed manually.

The rent in the uterine wall was about three inches in length, situated in lower segment to the right and posterior; a thick plug of iodoform gauze was passed through the rent into the peritoneal cavity, for the purpose both of drainage and to keep the intestines out of the wound, the lower end of the gauze being in the vagina. A hypodermic of ergotin was given, and the patient, on account of destitution, was removed to the hospital. She made an uninterrupted recovery. The gauze was removed in twenty-four hours; her temperature never exceeded 99.2° F., and she was discharged well on the 22nd April.

We consider that rupture of the uterus often takes place without any of the alarming symptoms which are recorded in the text books, and frequently is only diagnosed when the fingers are passed into the uterus to remove the placenta, or with some other object.

The treatment adopted in this case appears to be most satisfactory in cases of uterine rupture uncomplicated by severe hemorrhage, or the laceration of any other viscus.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF

PRICE-BROWN, M.D.,

Laryngologist to Western Hospital; Laryngologist to Protestant Orphans' Home.

Nasal Splints.

Richard Lake (*Jour. Laryng. Rhin. Otol.*, Aug., 1898) advises the use of splints, made out of rubber sheeting, for all intranasal work requiring their aid. The rubber sheeting can be obtained from any dealer in rubber goods, in three thicknesses of one eighth, two-eights and three-eights of an inch.

The shape and size can be made to suit the requirements of each case, the splint should be made long enough to pass pretty deeply within the nasal fossa, and either straight or boomerang in shape. If the thicker sheetings are used, the edges should he bevelled by means of a sharp, wet knife.

The advantages of splints of this kind are, that they are aseptic, and by their elastic pressure, when in position, have also a decided effect in straightening irregular cartilaginous tissues.

(Since first reading of Lake's Nasal Splints, the abstractor has had remarkable success in the treatment of a curved triangular cartilage, in a boy aged six years. The cartilaginous septum was thickened and deformed, filling up the right nasal fossa completely. By excising a narrow slip and then inserting a rubber splint, cut to suit the cavity, and having the patient wear it for several weeks, the passage was spread almost to the width of its opposite fellow.)

Membranous Rhinitis.

This disease has been the subject of two important papers during the present year. One by Richard Lake (*Laryngoscope*, Sept.) and the other by Middlemass Hunt (*Jour. Laryng. Rhin. Otol.*, Oct.).

Mr. Lake, in introducing his article, refers to a case reported by the abstractor to the Toronto Medical Society last winter. In this case the patient was a young lady aged seventeen. The disease was

confined entirely to one nostril, and caused complete stenosis of that side. It took several weeks to cure it. Microscopical examination of a culture of the membrane proved it to be one of staphylococcus pyogenes.

Mr. Lake's case occurred in a man aged fifty-four. There was obstruction of the right nasal fossa. It seemed to arise as a sequel to long standing hay fever. There were white translucent flakes in the one nostril, which could be separated without causing bleeding. The patient's general health was good. The nose was treated from time to time with some relief. After the lapse of eight months, he returned again for treatment. This time a gelatinous mass filled the cleft between septum and inferior turbinated. On removal it resembled the white of a plover's egg. Microscopical examination of a culture revealed pure staphylococcus pyogenes aureus.

This organization and also streptococcus pyogenes have been the exciting cause of the cases of membranous rhinitis so far bacteriologically reported.

The article by Middlemass Hunt, although entitled "The relation of fibrinous rhinitis to diphtheria," treats of the same subject. At a previous meeting of the British Laryngological Association he had reported a typical case of fibrinous rhinitis. In this one the patient remained in good health, the only symptoms being the one-sided stenosis and the profuse discharge. The case ultimately recovered. No bacteriological examination was made.

Subsequent to this time he had three other cases of membranous rhinitis; but all of them were so related to diphtheria that he distrusted their being independent of this disease. In one case pharyngeal diphtheria began in the third week of the nasal trouble. In another the rhinitis occurred, some weeks after convalescence, from an attack of diphtheria. And, in the third, it was followed within a few weeks by two cases of genuine diphtheria in the same family.

Middlemass Hunt concludes his article in these words: "I might venture to summarize one present position regarding fibrinous rhinitis to be as follows:

1. While admitting that other bacteria besides the diphtheria bacillus may give rise to membranous exudation in the nasal passages, the vast majority of cases of fibrinous rhinitis are due to the Loeffler bacillus.

2. That it is impossible on clinical grounds alone to distinguish fibrinous rhinitis from mild nasal diphtheria.

3. That all cases of fibrinous rhinitis should be regarded as diphtheria until the contrary has been proved by reliable bacteriological investigation.

Ozœna.

De Greift (*Annales et Bulletin de la Soc. de Med. d' Anvers*, Nov. and Dec., 1897) divides the so-called ozœna into five different forms. (1) Due to adenoids. (2) Due to sinusitis, with degeneration of the pitutary micous membrane. (3) Due to nucrosing ethmoiditis. (4) The purulent form with hypertrophy of mucous membrane in children, passing on to (5) Atrophic form or true ozœna.

Treatment. According to cause, which he gives as follows: Ablation of mucous membrane, application of powders, antiseptic and irritant, spraying with solutions of nitrate of silver. Vibratory massage, electrolysis, anti-diphtheritic serum, injectures of iodine.

Primary Epithelioma of the Antrum of Highmore.

Wendell C. Phillips, of New York (*Jour. Laryng. Rhin. Otol.*, July, 1898), gives an article upon this rare disease. Many of the cases of malignant affection of the antrum, that have been reported, have been cases of sarcoma. Heath, too, having had a wide knowledge of the subject, says: "The only form of true cancer, invading the upper jaw, is in my experience the medullary or encephaloid, but cirrhosis has occasionally been met with." Phillips, however, has made a very careful research of the literature of the subject, and has gathered together a brief history of fifteen cases of epithelioma of the antrum, taken from the writings of careful observers, and he closes with the history of one from his own experience.

This occurred in a saloon keeper aged fifty-eight. He was heavily built and ruddy, and, being a German, lived after the fashion of his people. Six years previously he complained of a pain in the right antrum, he had several teeth extracted; and after a time had an alveolar opening made. This never healed.

When he consulted Wendell Phillips, a large cauliflower-like excrescence projected into the mouth through the opening. It was about two inches long and three-quarters of an inch broad. The patient had never had severe hemorrhages from it; but touching with probe or fingers, or friction of food, produced slight bleeding. Transillumination revealed a dark area over the region of the ant-

rum. There was no glandular enlargement, no bony displacement, no protrusion of eyeball, no nasal stenosis, no nasal polypi, and but little secretion. Neither was there any history of specific disease, nor family history of cancer.

The protruding mass was removed by cold snare. Then a probe passed into antrum proved it to be filled with similar tissue. To facilitate operative treatment the alveolar opening was enlarged by curettes and gouges, sufficiently to admit the finger, and the whole cavity was thoroughly curetted out. The hemorrhage was severe, but special pains were taken to curette every crevice within the antrum. The cavity was then washed out with bi-chloride solution and packed with iodoform gauze. The packing was renewed every two or three days and the antrum cleansed with boracic acid solution. After about six weeks the packing was discontinued and the cavity allowed to close. Notwithstanding the large opening it healed entirely, and on May 10th, 1898, fourteen months after operation, there was no sign whatever of recurrence.

Microscopical examinations made by Jonathan Wright and T. M. Pruddin proved the growth to be œdematous polypsus of the antral mucous membrane with prolification of epithelial cells at the distal end of the growth. Whols of cells with hyaline centres were seen within the epithelial tissue, while nests of epithelium and isolated epithelial cells infiltrated the stroma, so that there was no sharp line of demarcatton between the truepyolpsus and the epithelium.

The conclusions were: 1. That large mucous polypi in the antrum may become malignant. 2. Early and thorough operation in all benign cases of antrum disease, both for the relief of the attendant affection and to prevent possible malignant developments, is to be recommended.

In this case the microscopical report would seem to indicate that the epithelioma had developed upon the surface of the mucous polyp.

Changes in Larynx in Leucocythemia

Otto Barnick (*Munchener, Med. Woch.*, Nos. 19 and 20, 1898), in an exhaustive article, throws new light upon the pathological conditions of the larnyx induced by this disease. While in many instances the clinical systoms in the larynx and trachea may not be noticeable, yet, in many others, the first indications of leucocythemia are in the form of marked dyspnoea and severe coughing; these symptoms occurring without any physical signs of disease, either of ungs or heart.

The pathological changes in the laryngeal and tracheal mucous membrane are well described by Eppinger. In the parts rich in glands, especially the epiglottis and false cords, slight catarrh occurs, with fine tuberculated swelling of the mucous membrane. Small lymph tubercles may form throughout the lining membrane of the larynx, and the tops of these may ulcerate. White blood cells accumulate in large numbers in the blood vessels of the larynx, and the characteristic infiltration takes place between the acini and ducts. These extravasations in the form of small islands, filled with white blood cells, have been termed leuchæmic infarctions. Sometimes they are put so much upon the stretch that the epithelial coating exfoliates. One characteristic of the leuchæmic process is that whether infarction or ulceration takes place the white blood cells remain unchanged.

When the tubercles or nodules are in exposed parts they readily break down by ulceration, and hemorrhage frequently occur from them. The most important of all the clinical features, when it occurs, is the diffuse leucocythemic infiltration, on account of the laryngeal stenosis which it produces. In some cases this infiltration comes on very rapidly, and is followed by death in a very few weeks.

PÆDIATRICS.

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P., Lond.,

ecturer on Clinical Medicine and Diseases of Children, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College

AND

W. J. GREIG, B.A., M.D.

Section in Pediatrics, British Medical Association.

Discussion on Rheumatic Heart Disease in Children. D. B. Lees (London). The fatal result is not generally due to endocarditis. This is usually found post-mortem in these cases, yet the damage to the valve is slight. Pericarditis is a much more striking phenomenon, p.m., and has more to do in producing a fatal result. This result is rarely produced by the effusion of large amounts of serum into the pericardial cavity, but by an adhesive pericarditis which injures the heart muscles, in some cases making it soft and pale, in others fibroid, and in others fatty. Dilatation is apt to be produced in this way, and in 150 post-mortems Dr. Paynton found 92 cases. The main causes of the large mortality are in rheumatism, 1st, adhesive pericarditis, 2nd, dilatation. Dilatation is especially worth study, because it may be present also in rheumatism without pericarditis or endocarditis in sub-acute first attacks with slight fever and little arthritis. This may be demonstrated by light percussion, by the diffuse impulse, and by extension outwards of the apex beat. This acute dilatation appears to be due to a toxic action of the rheumatic poison in the heart, similar in character to that of influenza. In the treatment of rheumatism it is very important to remember that the extension of dullness is due,not to effusion, but to dilatation. It is doubtful whether an adhesion of the two pericardial layers does much harm except to render permanent the dilatation present. Very little attention need be paid to the presence of mumurs in forming an opinion on prognosis. Prognosis depends on the amount of dilatation present; more importance may be at-

tached to mitral diastolic murmurs when the second sound is doubled. This third sound is produced by the sudden tension of the stiffened mitral valves in diastole of the ventricle. The sounds produced may be symbolized as whoo-ta-ta or whoo-ta-who.

Conclusions—Prognosis depends on, 1st, amount of dilatation present, 2nd, adhesive pericarditis, 3rd, the evidence of fresh rheumatic toxæmia, such as sore throat, erythema, nodules, etc.

Dr. Osler complimented the writer of this paper and pointed out three important factors in prognosis :—

(a) Adhesion between the pericardium and the different layers of the pleura and the mediastinum ; 2nd, the persistent recurrence of rheumatism. He referred to Dr. Rotch's sign of dulness in the fifth right intercostal space as an evidence of effusion.

Drs. Broadbent and Ewart both claimed that this dulness was due to dilatation as stated by the essayist.

TREATMENT OF HYDROCEPHALUS BY INTRACRANIAL DRAINAGE.

(G. A. Sutherland and Watson Cheyne, *Brit. Med. Journal*, Oct. 15th, '98.)

This refers only to the treatment of those cases present at birth, or which have developed during early life without apparent cause. It is assumed that the hydrocephalus is due to the closure of the channel by which naturally the fluid secreted in the ventricles drains into the sub-arachnoid space. Leonard Hill has shown that the tension of the cerebro-spinal fluid is the same as that in the cerebral veins. Therefore if the pent-up secretion of the ventricles could be drained into the sub-arachnoid space the injurious pressure on the brain substance would be relieved. Three cases are reported :

1st. An infant 6 mos. old with progressive hydrocephalus from birth. The vertex was represented by a large membranous space 9 in. x 9 in. An opening was made at the left lower angle of the anterior fontanelle and the dura incised for ¼ of an inch. There was no fluid in the sub-dural space. One end of a catgut drain, 2 inches long, was pushed into the space and the other end through the brain substance (which was very thin) into the lateral ventircle. In 5 days there was a distinct lessening of the size of the head and tension was absent. The diminution continued until, at 3 months, the cranial bones were overlapping. At this time, the child sickened and died with symptoms of basilar meningitis. There was no mental improvement.

2nd. This was an advanced case of 3 mos. of age. An exactly similar operation was performed. The size of the head diminished very much, but asymmetry was marked. Two and a half months after the operation the head was shaved, and it was then seen that the asymmetry was due to the disappearance of the fluid from one ventricle (the one drained) and the other was still distended. Evidently the foramen of Munroe had become occluded. The other side was then operated on in the same manner. Six months after the first operation the cranial bones were overriding, the child was well and gaining in weight. But there was no evidence of mental development.

3rd. The result in this case was not so fortunate, as shortly after the operation the child developed measles, with broncho-pneumonia, and died.

Further investigations are promised.

Editorials.

JOURNAL AMALGAMATION.

WE have to make the important announcement that the proprietors of THE CANADIAN PRACTITIONER and *The Medical Review* have agreed to an amalgamation. On and after January, 1899, the name of the new journal will be *The Canadian Practitioner and Medical Review*. We hope by a combination of the energies of the two different staffs to be able to publish a journal which will be much better, both for our subscribers and advertisers, than either has ever been in the past. THE PRACTITIONER has existed for twenty-two years and *The Review* for eight years. Dr. W. H. B. Aikens, the editor-in-chief of *The Review*, was for some years one of the editors of THE PRACTITIONER, and the success of the journal at that time was largely due to his efficient work. The chief aim under the new management will be to make the journal acceptable to all classes of physicians in Canada and the United States.

BANK BILLS AND CONTAGIOUS DISEASES.

DON, in *Saturday Night*, in referring to various means by which contagion and infection might occur, spoke of bank bills as a medium whereby contagious diseases were frequently spread. There is no doubt that he is quite right in his contention. In fact we presume no one will deny that the dangers connected with the handling of dirty bills are somewhat serious. In another issue of the same paper Don prints a letter from a bank clerk, which we think so good that we quote the greater portion of it as follows:

"Now, I would like to see this matter taken up, and if possible force the Government to keep clean their own issue of legal tender, and also force the different banks holding charters from them to give more attention to the cleanliness of their circulation. As a bank teller I may say that the bills kept in circulation by some of

the banks are so filthy that it is not only dangerous to handle them, but as well most disagreeable and sickening. Now, there is no reason why we should not have a fairly clean bank circulation if some pressure were brought to bear on the banks who try to make a bill wear for ten years when perhaps it is unfit for circulation after one year's use. You shall be conferring a favor on many bank tellers and on a suffering and patient public if you will bring this matter before them in your usual fearless and forceful manner."

THE VICE-CHANCELLOR OF THE UNIVERSITY OF TORONTO.

THE re-election of the Hon. Wm. Mulock as Vice-Chancellor of the University of Toronto by an unanimous vote of the Senate at the regular meeting held November 11th afforded much satisfaction to his friends. Mr. Mulock has occupied this position since 1880, and has always been elected without opposition or by a very large majority. We believe that the confidence which has been shown by this remarkably strong and influential educational body towards this distinguished graduate of the University has not been in any sense misplaced.

Mr. Mulock has been the leading spirit in the various negotiations which took place between the University authorities and the various institutions which were considering federation or affiliation, viz., Knox College, St. Michael's College, Victoria University, the Agricultural College, the College of Pharmacy, the School of Practical Science, the Royal College of Dental Surgeons, the Toronto College of Music, and the Conservatory of Music; and the successful issue of such negotiations was chiefly due to his great prudence and tact.

From our point of view the most important work done by him was that which resulted in the re-establishment of the Medical Faculty, in 1887. The great interest he took in this Faculty, and the enormous amount of work he did for it are pretty well understood, and very highly appreciated by the great body of medical graduates, and also by the non-medical friends of the University. His devotion to this Faculty was said to be one of the chief causes of that attack in his general University policy in recent years, which resulted in the establishment of pronounced partyism in the Senate.

We can scarcely say now that this partyism has ceased to exist, but we hope that a great portion of the bitterness has gone out of it. It is surely a matter of course that the Vice-Chancellor was correct in saying, while he was returning thanks for the honor

which had been conferred on him, that anything like a party spirit in the administration of University affairs was greatly to be deplored. We are more than pleased at the action of the Senate, and we consider that those who have formerly opposed Mr. Mulock's election have done a graceful act in allowing this unanimous vote without even a whisper of adverse criticism.

THE WORK OF THE COMMITTEE ON INTER-PROVINCIAL REGISTRATION.

WE have before referred to the work which was done by the Committee on Inter-provincial Registration at the last meeting of the Canadian Medical Association, which was held at Quebec. We were afraid at the time that probably nothing more would be done for another year. We are glad to find that such is not the case. As a matter of fact, the Committee is working with commendable zeal, and the prospects for the settlement of a matter that is of such serious importance, from a medical and even a national point of view, are brighter now than they have been in the past. The members of the Committee who are taking the most active interest in the matter, so far as we know, are Drs. Roddick (Chairman), Williams, Dickson, Thorburn, and Mullin, with certain others in Quebec and the Maritime Provinces.

The members of the Committee whose names we have given held a meeting in Toronto, October 22nd, for the purpose of conferring with physicians in this vicinity with reference to the details of certain schemes which are now under consideration. It was supposed by many that inter-provincial reciprocity, or inter-provincial registration would be established, but the difficulties which have been cropping up from various sources appear to be rather serious.

The meeting in Toronto was a very good one in every respect. There was a good attendance of representative men, and all seemed impressed with the idea that the question was a very important one, and should be settled as soon as possible. Dr. T. G. Roddick, who came so far to attend the meeting, certainly deserves a great amount of credit for the deep and intelligent interest he has taken in the matter for the last few years.

DOMINION REGISTRATION.

IT seems probable that "Dominion Registration," arranged along certain lines, will solve the difficulties which have so long stood in the way of furnishing one license to practise for the whole Dominion. This is the scheme that was chiefly discussed at the

Toronto meeting. It is recommended that each province shall be allowed to control (as it has done in the past) medical matters through its own Medical Council. We don't exactly understand all that Dr. Roddick has in view, but the following quotation from *The Montreal Medical Journal* will show what some of our friends in the East think: "Each province shall still determine for itself what may be spoken of as the minimum qualification permitting practice within its borders, and it is implied that every practitioner in any province, however qualified, shall pay the regulation dues of the College of Physicians and Surgeons or Medical Council of that province. But if a student desires to qualify himself to practise at any point, and in any province of the Dominion, then, upon the completion of the stipulated course, he shall present himself before a body of Dominion examiners. Thus a student may elect from the start to qualify for practice in one province, or for practice in the Dominion at large. And not only this, but if the scheme be carried through, then, at last, the Canadian graduate passing the Dominion Board will be qualified to practise through the length and breadth of the Empire. In simple justice to those already qualified it is inevitable that they must be permitted, upon application, to obtain the Dominion license."

The best feature of this scheme is the fact that it does not propose in any way to interfere with any existing laws. It would, indeed, be very difficult to do anything of the kind, because, by the Confederation Act, the various provinces are given supreme control of all educational matters. We are very glad, indeed, to see such men as Drs. Williams, Dickson, Mullin and others take sufficient interest in the subject to come from their homes to Toronto to confer with Drs. Roddick, Thorburn, Britton, etc., about the matter. So far as we can ascertain a majority, if not nearly all the members of the Ontario Medical Council will support the scheme in its main feature.

MEDICAL COUNCIL ELECTIONS.

An unusually large number of the members of the Ontario Medical Council have been elected by acclamation. The following old members have been re-elected without opposition: Drs. Bray, Williams, Roome, Brock, Henry, Hanly, Barrick, Saugster, McLaughlin, Thornton, and Dickson.

The following new members have been elected without opposition: Dr. J. A. Robertson, of Stratford, in the place of Dr. Taylor, of

Goderich; Dr. A. A. Macdonald, of Toronto, in the place of Dr. Spence; Dr. Lane, of Mallorytown, in the place of Dr. Reddick, of Winchester; Dr. Powell, of Ottawa, in the place of Dr. Rogers.

The following Collegiate Representatives have been elected: Dr. Thorburn, representing the Toronto School of Medicine; Dr. Sullivan, representing the Royal College of Physicians and Surgeons, Kingston, in the place of Dr. Fowler.

There are only two contests for territorial representation: one in Division 7, between Dr. McCrimmon, of Palermo, the former member, and Dr. Stuart, of Milton, and another in Division 8, between Dr. Armour, the former member, and Dr. Glasgow, of Welland.

The representatives of the following universities—Toronto, Victoria College, Queen's College, Trinity College, Western and Trinity Medical College—have not yet been elected. Dr. Britton will probably be elected by the Senate of Toronto University in December. Dr. Oille, of St. Catharines, has been named, but we hope his friends will not allow a contest. Drs. Griffin, Moore, Douglas, Geikie and Moorehouse will probably be re-elected. The election for territorial representatives in Divisions where contests are going on will be held November 29th.

A PROVISIONAL SCHEME FOR AN ACADEMY OF MEDICINE FOR TORONTO.

(1) The present societies shall cease to exist, and the members become Fellows of the academy.

(2) The academy shall begin work in three sections, and monthly meetings shall be held of the academy and of each section.

(3) The officers of the academy shall be president, first and second vice-presidents, recording and corresponding secretaries, treasurer, and a committee consisting of the chairman of each section.

(4) The sections shall be constituted, as near as may seem wise, along the lines of the present societies. They shall be organized at the call of the president, and at the first meeting shall elect a chairman and secretary.

(5) The library shall be an affiliated institution. If the academy is able to provide funds to carry on the library, all the Fellows shall have the right to all its privileges. Otherwise they shall have its rights according to present arrangements, or by paying a fee of one dollar ($1.00) a year over and above that paid by the stockholders

In any case the library board shall be elected as hitherto, excepting that the academy shall elect two or more representatives.

(6) Fees shall be not less than five dollars ($5.00) and not more than ten dollars ($10.00). The exact sum will depend on the number of members.

(7) It is understood that this is purely provisional, and may be altered in the committee appointed by the different societies.

We, the undersigned, do hereby express our approval of the formation of an Academy of Medicine in the city of Toronto, on some such scheme as proposed above.

REGISTRATION OF BIRTHS AND DEATHS.

IT is very important that the registration of births and deaths should be complete, or as nearly complete as possible. Dr. P. H. Bryce, the Deputy Registrar-General, has issued a circular to physicians, including superintendents of all lying-in hospitals, asking them to send returns of births, *including still-births*, during the year 1897. It seems that Dr. Bryce found, on summing up the returns already received for Toronto, that only three still-births were registered in a total of 4,078 births recorded. He presumes from this that "the practice on the part of parents and physicians has been to return all still-births only as deaths. In view of the public interest which has been aroused in the matter of the birth rate of Ontario as compared with that of other countries," he wishes to have returns more nearly complete. We hope the profession will support Dr. Bryce in his efforts to have a correct registration of births and deaths and send in their reports as soon as possible, if they have not already done so.

Correspondence.

To the Editor of THE CANADIAN PRACTITIONER:

SIR,—In the September issue of your journal I saw a suggestion in your editorial column looking toward increasing the interest in the Canadian Medical Association. At an early date there will be a meeting of the committee on by-laws when I shall be most happy to bring the matter before it, as well as any further suggestions that you or any of your readers may see fit to make.

For some time past it has been a source of regret to me that the meetings are not better attended, but when some months ago I examined the register I found that during the past ten years the average attendance has been 109, while during the preceding ten years it was but 74. The average during the last ten years would be even greater were it not that the '97 Montreal meeting is included, for this was purely a business meeting sandwiched in at the time of the British Medical Association. I think one must admit that this is a healthy increase, though by no means what it should be.

In the interests of the association I hardly think Ottawa the best place for the annual meetings, for while the programmes have always been excellent the attendance has been small—smaller even than that at the Quebec meeting this year. From my perusal of the register I find that in the larger cities the attendance has been larger. Would it not, therefore, be advisable to hold our meetings every three years in Montreal, Toronto, and in one of the cities of the Maritime Provinces, say, in St. John and Halifax alternately?

It is a source of satisfaction to me to see THE PRACTITIONER thus early commencing to work up the Canadian Medical Association, and I earnestly desire that the other journals will follow suit, in order that the Toronto meeting in 1899 may be the largest and most enthusiastic the association has yet seen—larger even than the '96 Montreal meeting, which was the largest to date.

Yours faithfully,

F. N. G. STARR,
General Secretary, Canadian Medical Association.

Meetings of Medical Societies.

THE AMERICAN ELECTRO THERAPEUTIC ASSOCIATION.

THE eighth annual meeting of the American Electro Therapeutic Association was held September 13th to 15th at Buffalo, N.Y., in the rooms of the Society of Natural Sciences, Public Library Building. Dr. CharlesR. Dickson, of Toronto, presided at the meetings, calling the association to order on 13th at 10 a.m. After divine invocation by Rev. O. P. Gifford, a short business session was held. The association was welcomed to the city by Dr. Conrad Diehl, the Mayor; Dr. Francis B. Bishop, of Washington, D.C., responded to the address of welcome. The reports of committees on scientific questions having been received, the following papers were presented:

Phlebitis: A Clinical Study. By Dr. Margaret A. Cleaves, New York.

Histories of three cases were given in which the benefit of electrical treatment was shown. The continuous current supplemented later by the sinusoidal, being employed; in one case franklinism was used owing to the inability of the patient to devote sufficient time to treatment. Early application, in the acute or sub-acute stage, was advocated.

New Uses of the Undulatory Current in Gynæcology. By Dr. Georges Apostoli.

Conclusions drawn from 183 observed cases were presented and results classified. Attention was drawn to its analgesic, decongestant, resorptive, vasomotor properties and as an increaser of muscular tone even remedying malposition in certain cases also its action on the nervous system and electrolytic action. It was recommended in non-purulent endometritis and painful fibroma feebly hemorrhagic and of slow evolution, in subinvolution, prolapse or malpositions, congestions, stases, peri-uterine and peri-annexial exudates.

Electricity in the Treatment of Uterine Fibromata. By Dr. Felice LaTorre, Royal University of Rome, Italy.

Needless hysterectomies were scathingly condemned, the proper indications for resort to this measure pointed out. "Immense and salutary is then the action of electricity as the symptomatic treatment adapted to overcome the frequent and most dangerous symptom of fibromyomata—hemorrhage—which by its gravity gives more than anything else the clinical character of malignity to fibromata, besides electricity being able to determine the spontaneous expulsion of fibrous bodies and rendering them more accessible and thence more readily removable..... Electricity lessens the physical sufferings by calming pain, restores strength, improves the nutrition and supports the spirit and the *morale* of the patient."

Electricity employed in Gynæcology. By Drs. Georges Gautier and J. Larat, Paris, France.

The comparative merits of simple or metallic electrolysis, undulatory alternating currents, induced currents of tension and quantity, "a powerful therapeutic arsenal," were set forth briefly.

Menorrhagia and Its Treatment by Weak Galvanic Current with Intra-uterine Positive Silver Electrode. By Dr. Adelstan de Martigny, Montreal, Que.

The paper, based upon seventeen severe cases, claimed that this was the treatment *par excellence* applied once or twice a week in the intervals of the periods 3-6 milleamperes for five to ten minutes. Advantages 1, absence of danger; 2, absence of pain; 3, no confinement to bed and consequent loss of time; 4, constant good results even when operations have failed; 5, the immediate tonic and quieting effects obtained.

Electricity in Deafness and Stricture of the Eustachian Tube. By Dr. Robert Newman, New York.

The object of the paper was stated to be: 1, to show that electrolysis can cure strictures of the Eustachian Tube; 2, to induce the profession, and particularly the aurist, to add electro-therapeutic measures to the treatment of the ear in deafness, and particularly when other means will not cure. Cases were quoted not alone from the author's experience, but from many other physicians in support of the contention; galvanism and electrolysis by special eustachian electrodes being employed.

The Use of Electricity in Acne Vulgaris and Acne Rosacea. By Dr. Grover William Wende, Buffalo, N.Y.

The two different ways in which electricity is used with advantage were dwelt upon, viz., for electric stimulation and irritation, percutaneously; and for electrolysis, by electric needle.

The Diagnostic and Therapeutic Relations of Electricity to the

Diseases of the Central Nervous System. By Dr. A. D. Rockwell, New York.

A paper written because the author has "frequently found the most extraordinary and unjustifiable misconception of the role electricity should play in brain and spinal diseases respectively, and have read of results in hemiplegia ascribed to electrization, that known pathologic conditions and experience both contradict," and to discourage improper and hurtful measures. In hemiplegia of cerebral origin electricity had been of great value for its invigorating effects and its power to hasten absorption; invigoration being more perfectly attained by the use of static electricity, with faradism to retard wasting of muscles through disuse, and galvanism to hasten absorption. Greatest care should be exercised not to employ electricity too soon or carelessly. In spinal paralyses, electricity is useless in acute inflammatory conditions and in primary spastic paraplegia, and in the former may easily do harm. In poliomyeletis anterior both of childhood and in the adult electricity is more useful than any other remedy; galvanism directly exciting functional activity of muscular fibre, indirectly improving nutrition and augmenting the vitality of the spinal nerve cells in connection with these fibres.

High Tension Currents in the Treatment of Neuritis. By Dr. Francis B. Bishop, Washington, D.C.

The search for reactions of degeneration in these conditions was characterized as simply barbarous in irritating tender nerves with a small motor point electrode. With a static machine, the small Leyden jars being connected by the discharging rod, the current is taken from a shunt on one side of the machine and from the prime conductor on the other, giving an apparently continuous discharge sufficient to excite an X-ray tube, and unidirectional; a large surface electrode covers all the cervical and several dorsal vertebræ, with a suitable electrode over the seat of pain or to extremities affected; the machine being started, the spark gap is gradually opened until the patient feels only slightly the vibrations, this is continued for twenty minutes, and is most soothing. Several patients suffering from multiple neuritis when treated at their homes by the high tension coil have steadily improved.

Electricity in the Treatment of Goitre. By Dr. Charles R. Dickson, Toronto.

A brief resume of some forms of electrical treatment found useful. In exophthalmic goitre, central galvanization, and mild percutaneous applications daily; in engorgement, mild negative local percutaneous application three times a week; slight hypertrophy,

negative with currents to limit of toleration ; in vascular forms, positive puncture; fibroids, negative puncture with currents strong enough to destroy fibrous tissue, occasionally puncturing with both poles; in cystic, replacing contents with a good electrolyte and endeavoring to obliterate cavity by exciting adhesive inflammation in walls of same by negative pole.

Ten Minute Talks upon Electro-Therapy. Introduction by Dr. Charles R. Dickson.

The object was stated to be to set before the general practitioner a few brief, pithy statements of claims for usefulness that might be of value in daily work. The talks were to be free from technicalities as far as possible, and suggestive rather than exhaustive.

The Galvanic Current in Gynæcology. By Dr. G. Betton Massey, Philadelphia, Pa.

The intelligent application of galvanism will render four-fifths of the minor and major surgical operations unnecessary in the treatment of ambulant cases of diseases of women, whether imperfect development, neuroses, fibroid tumors (35 per cent. curable), inflammatory conditions.

Some Surgical Uses of Electricity. By Dr. Charles R. Dickson, Toronto.

The constant current is capable of inducing irritation, stimulation, derivation, liquefaction, absorption, coagulation, or complete destruction of the tissue acted upon, according to strength of current and method of using. Nævus, papilloma, hydrocele, goitre, fistulous tracts, were instanced as some of the conditions to be treated successfully by electricity.

The Combined Use of Medicinal and Electrical Treatment in Some Affections of the Eye. By Dr. G. Herbert Burnham, Toronto, Ont.

The paper was written to encourage oculists to be more hopeful regarding prognosis in certain desperate diseases of the eye, and more energetic and methodical in treatment. Retinitis pigmentosa, retino-choriditis, optic atrophy, ophthalmoplegia externa and interna, were alluded to as cases in which improvement might be looked for. Many cases were cited in proof of this. Strychnine, with sometimes iodide of potash and iodide of iron, and mild galvanic currents, continued not for months, but sometimes years, was advocated. The cases had been treated at Toronto General Hospital, the electrical technique being entrusted to Dr. C. R. Dickson.

Electricity in Genito-Urinary Diseases. By. Dr. Robert Newman, New York.

Hydro-galvanism, soluble electrodes, the endoscope, strictures of urethra and of rectum, incontinence of urine, prostatic troubles, were the topics dealt with.

The Functional Neuroses, with Special Reference to Neurasthenia: Their Pathology and Treatment. By Dr. A. D. Rockwell, New York.

"In no classes of diseases, perhaps, are stereotyped methods of treatment—either medicinal, electrical or hygienic—of less avail than in the functional neuroses." Neurasthenia was dealt with as a derangement of cellular nutrition, fatigue carried to excess. It is to electricity that the author turns for the best results that therapeutics is capable of yielding, the form used being that found most suitable to each particular case, static being a favorite form. The discovery of M. Edouard Branly, of Paris, was alluded to as throwing much light on the *rationale* of the therapeutic action of electricity.

The Alternating Current. By Drs. George Gautier and J. Larat, Paris, France.

The favorable influence of hydro-electric baths with alternating current on rheumatism, gout, anemia, neurasthenia, a great number of nervous troubles, and muscular atrophies was recalled; attention was then directed to its use in certain diseases of the digestive organs, particularly the stomach, *e.g.*, dilatation in neurasthenics.

Hot Air and Electric Light Baths for Medical Use. By Drs Georges Gautier and J. Larat, Paris, France.

During the last half century many diseases have been treated by means of hot air, for instance, gout and allied disorders, Bright's disease, psoriasis, eczema, dyspepsia, catarrh, bronchial and emphysematous asthma, tuberculosis, sub-acute nephritis, dropsy whether nephritic, cardiac or hepatic, chlorosis, rheumatism, uterine and peri-uterine phlegmasias. The authors have been employing with good results since 1895 hot air and electric light baths.

The Electric Arc Bath: A Preliminary Report. By Dr. Margaret A. Cleaves, New York.

The necessity for sunlight is unquestioned; the electric arc bath is the nearest approach to sunlight in existence, the alternating is the best source of supply. The electric arc has been used by the writer in the treatment of anæmia, chorea, eczema and psoriasis with general mal-nutrition, but the most extended observations have been made in diseases of the respiratory tract, *i.e.*, subacute bronchitis, bronchial asthma, acute and chronic phthisis. Extended histories were given of several cases treated.

The Electric Light Bath. By Dr. J. H. Kellogg, Battle Creek, Mich.

The therapeutic effects of this bath are practically those of heat; general effects, primary and secondary, were first considered, and the influence of duration of application; next came effect on skin, circulation, respiration, muscles, blood, general nutrition, abdominal organs, effects on heat production and body temperature; the electric light bath as a means of inducing perspiration, for alterative and spoliative effects, depurative or eliminative effects, advantages of this means of applying heat.

The Effect of High Tension Discharges on Bacteria. By Drs. J. Inglis Parsons and C. Slater, London, Eng.

A negative conclusion was reached. Staphylococcus pyogenes aureus, micrococcus prodigiosus, bacillus coli, bacillus mycoides, Loeffler bacillus, bacillus pyocyaneus, bacillus diphtheriæ were submitted to discharges from a specially constructed coil with low resistance in secondary (1000 ohms) giving a 7 in. spark in air. Four series of experiments were carried out, cultures in U tube in bouillon, and gelatine with electrodes in contact with medium; (2) inoculated tubes of beef; (3) an air gap of three inches in circuit, carbon electrodes at ends of tube, agar agar culture; (4) a Leyden jar substituted for air gap, other conditions as last. The discharge did not appear to affect the organisms in any way, and produced no effect on their virulence, pigment producing functions or rapidity of growth.

Two Years' Practice with the Roentgen Rays. By Drs. Georges Gautier and J. Larat, Paris, France.

The "modele Dueretel" is used, focus tubes, giving radiographs of hand in one second, thorax in fifteen, pelvis in fifty to sixty seconds. As to tuberculosis the rays can only supplement a diagnosis possible through older methods. Valuable in coxalgia, disorders of cotyloid cavity, also in congenital luxations, Barlow's disease.

Alternating Dynamo Currents. By Dr. Francis B. Bishop, Washington, D.C.

A brief paper dealing with some of the uses to which the current may be put, but not touching upon its therapeutic properties.

Report on the Action of X-Rays on Tuberculosis. By Drs. J. Bregonie, of Bordeaux, and Teissier, of Paris, France.

The report dealt with accidents caused by the rays, conditions under which the experiments were carried out, technique, lack of exact measurement, etc.; observations, experimental and clinical, were set forth, but no positive conclusions have yet been reached.

The New Cataphoric Treatment of Cancer. By Dr. G. Betton Massey, Philadelphia, Pa.

The method consists in the electrical convection of mercuric oxychlodide from gold electrodes by currents of 350—1200 or more m.a. under anæsthesia, and is only applicable as a curative agency to growths still local, or with infected glands in a situation to be reached directly, but may be used as a palliative in incurable cases.

Orthopædic Uses of Electricity. By Dr. Louis A. Weigel, Rochester, N.Y.

Electricity is an important adjuvant in many cases such as lateral curvature, metatarsalgia, flat-foot, etc. A large number of excellent radiographs of orthopædic cases were shown. Author has used static machine for X-Ray work for one and a half years, and has yet to see the slightest burn. He considered that the secret of his immunity was that in no case was the tube nearer than eighteen inches.

"Treatment of Uterine Fibroids by Small Currents Administered Percutaneously." By Dr. R. J. Nunn, Savannah, Ga.

A paper written to prove that mild currents, applied percutaneously by means of uncomplicated apparatus, the technique being simple, had a wide range of usefulness in the conditions referred to, and that the method was absolutely devoid of risk, which should commend the procedure to the favorable consideration of the general practitioner, especially in the country districts, where the services of a specialist were not available.

"On the Use of Cataphoresis in Certain Forms of Conjunctival Inflammation." By Dr. Lucien Howe, Buffalo, N.Y.

In conditions of engorgement of conjunctive cataphoresis is of great advantage in applying the solution of supra-renal capsule to reduce the engorgement, and, after that, in applying the cocaine or other drugs which may be necessary. Other uses were also alluded to.

"High Frequency Oscillators for Electro-Therapeutic and Other Purposes." By Mr. Nicola Tesla, E.E., New York.

In this paper the role of the condenser in electricity was elaborated; the statement was made that, if a powder could be compounded that would explode with the rapidity and force with which an electrical condenser discharges, one ounce of such a powder would be sufficient to blow up the largest battleship afloat. One of the effects of the current from the oscillator was shown to be that it would remove almost instantaneously any foreign matter from the

surface of the skin and that it might be possible by this means to render parts aseptic for surgical purposes. The currents were apparently not only harmless but might prove to be of high therapeutic value. To demonstrate this fact oscillators were to be sent to the laboratory of the University of Michigan to have their therapeutic worth tested by Dr. W. J. Herdman.

"Some Suggestions on the Possibilities of Cataphoresis." By Mr. J. J. Carty, E.E., New York.

Valuable suggestions were thrown out as to lines along which it might be well to prosecute some enquiries. Several experiments of a most interesting nature had been conducted by the writer, and future attempts were outlined.

A resolution was passed, requesting colleges and medical schools to establish chairs of electro-therapeutics. or, in case that was not at once practicable, to devote more time to the teaching of this important branch. The matter was also urged upon the attention of The Association of Medical Colleges. The University of Buffalo was congratulated upon having established such a chair. Many new members were elected.

Officers for the ensuing year were elected as follows: President, Dr. Francis B. Bishop, Washington, D.C.; First Vice-President, Dr. Ernest Wende, Buffalo, N.Y.; Second Vice-President, Dr. W. H. White, Boston, Mass.; Secretary, Dr. John Gerin, Auburn, N.Y.; Treasurer, Dr. Richard J. Nunn, Savannah, Ga. Executive Council—Dr. Robert Newman, New York; Dr. G. Betton Massey, Philadelphia, for three years; Dr. A. D. Rockwell, New York; Dr. William J. Morton, New York, for two years; Dr. Charles R. Dickson, Toronto, Ontario; Dr. Frederick Schavoir, Stamford, Conn., for one year.

The Association will meet at Washington, September 19th to 21st, 1899.

TORONTO PATHOLOGICAL SOCIETY.

The opening meeting for the year was held in the Biological Building, Queen's Park, October 29th, 1898, Dr. Primrose, President, in the chair.

Present: Drs. Anderson, Wilson, Amyot, Coleman, J. J. Mackenzie, Peters, Wm. Oldright, Reeve, Rudolf, Carveth, Greig, Fotheringham, Graham, King, Cameron, Peplar, Bingham, Silverthorne, McPhedran, Parsons.

Visitors: Drs. Page, Hassard, White, Bethune.

Meeting called to order at 8.45 p.m.

The minutes of the previous meeting were taken as read and adopted.

Dr. Primrose delivered the Presidential address.

Moved by Dr. Peters, seconded by Dr. Anderson, that a vote of thanks be extended to Dr. Primrose for his excellent address. Carried.

Dr. Reeve reported a case of cerebral abscess, secondary to middle ear disease.

To be published later.

Dr. H. B. Anderson read a paper on, and presented a specimen of, Anomaly of position of the left kidney and congenital absence of one ovary. To be published later.

Dr. E. E. King read a paper on Bristle in Appendix, and presented specimen.

BRISTLE IN VERMIFORM APPENDIX.

The patient, a male, driver of grocery wagon, had suffered from severe, sharp, lancinating pain in the right side of abdomen for years. It became so severe that he went into the hospital, where disease of gall-bladder was diagnosed, and for which he underwent operation. No disease was found. He recovered from the operation, and went out, but was no better. Eighteen months afterwards he came under my care, with symptoms of wandering kidney. While he was confined to bed his attacks would be less severe and less frequent. His condition did not warrant an operation, although I could palpate the appendix, and the symptoms of wandering kidney disappeared. I sent him out, and advised that he go to work: thought that possibly he was a hypochondriac. Nine months afterward he came to me, and, as his pain was still present and of more frequency, I took him to St. Michael's Hospital and removed his appendix, which contained a bristle, apparently from a tooth-brush.

The patient has lost his pain since the operation. The only other case I can find is reported from the London Pathological Society.

Report of a case by Mr. Nathaniel Ward, published in Transactions Pathological Society, London, Volume VI, 1855, pp. 197.

PERFORATING ULCER AND SLOUGHING OF PART OF THE VERMIFORM APPENDIX, CAUSED BY A BRISTLE; DEATH HAVING RESULTED FROM VIOLENT PERITONITIS.

A gentleman, æt. twenty-seven, of temperate habits, being in fact a teetotaller, on his arrival home, five miles from London, was seized with violent rigors. Having accidentally gone by the wrong train, he had been exposed for some time on the railway platform, and had felt cold and chilly prior to the occurrence of, what he termed, this attack of ague. The rigors occurred on the following day, and he then complained of pain in the belly. These symptoms continued during the next day; and on the fourth after his seizure he was seen by Dr. George Jackson, of Tottenham, who, on a careful examination of the abdomen, detected a peculiar tender part in the immediate neighborhood of the right iliac region, and which yielded a duller sound on percussion than the remainder of the abdominal walls. The patient, on this day, complained of great debility, great pain in the right iliac region, darting through to his back, and he vomited, on several occasions, dark-green, bile-like fluid. On the fifth day the symptoms had become more severe; the pain in the abdomen had amounted to agony; he was restless; the breathing had become hurried; and the only position he could keep himself in was the sitting, with the thighs drawn up. The treatment, which consisted in the use of leeches, calomel and opium, occasional injections, and surface counter-irritation, produced no appreciable relief; and the symptoms rapidly augmented in intensity, with the addition of constant hiccoughing. Dr. Thomas Lee Blundell, of New Broad Street, saw him several times in consultation with Dr. Jackson, and on the seventh day after his seizure Mr. Ward also visited him, on which occasion the patient appeared to be sinking.

He died the same night; excessive restlessness, dyspnœa, profuse perspiration, increased abdominal tympanitis, and suppression of urine for two days, having preceded dissolution. From the time of his attack to its fatal termination, the bowels had, on several occasions, acted of their own accord, and responded to injections; and, on one occasion, an elastic tube had been passed more than three feet up the large intestine, with the view, mainly, of discovering whether there existed any obstructive disease or not.

The body was examined thirty-six hours after death by Mr. Ward. On the completion of the abdominal incision through the linea alba, a large quantity of thick purulent fluid escaped. The abdominal perietal peritoneum was adherent to the viscera by plastic exudation, that had been more copiously deposited in the region of the right iliac fossa than elsewhere. The free and contiguous surfaces of the small and large intestine were similarly invested, and the folds of the small were quite adherent; the peritonitis had been most intense over the cæcum and lower part of ileum. On turning aside the former by detaching the peritoneal reflection to the abdominal wall on the right side, a small abscess was exposed between it and the loose tissue in the iliac fossa. Protruding through that part of the wall of the small abscess in relation to the cæcum was a small, worn-down bristle, about one-third of an inch long, that apparently had belonged to an old tooth brush. This, on further examination, was found to have ulcerated through the vermiform appendix, at the juncture of its distal one-fourth with the proximate three-fourths. A probe passed through the appendix came out where the bristle was, in the centre of the abscess. Beyond this, for a quarter of an inch, the coats of the vermiform appendix were sloughy, and nearly disintegrated. The vermiform appendix was directed upwards and backwards, the whole being behind the cæcum and adherent to it by inflammatory products.

Dr. Silverthorn showed specimens of ulceration of rectum and recto-vaginal fistula.

Some discussion took place as to the character of the ulcers, whether stercoral or syphilitic, Dr. Cameron, Anderson and others taking part.

TUBERCULAR KNEE.

Presented by Geo. A. Peters, F.R.C.S. Eng.

J. McC., æt. 17. Admitted to Toronto General Hospital under my care Sept. 5th, 1898.

Family history is good. There is no tubercle in the family so far as known.

Personal history. Habits good; worked as deck hand on the upper lakes.

Present illness. Two years ago he was struck on the knee by an iron bar. No abrasion of skin was caused. He says that about twenty minutes after the accident the cords of the knee contracted, and he was unable to straighten the leg for two days. This injury laid him off work for about three weeks. When he returned to

work a little stiffness and swelling remained. In the latter part of 1897 he became much worse, the pain being very severe in the knee, especially if he stumbled or wrenched the limb in any way.

In February, 1898, he entered the Huntsville Hospital, where he remained for twenty-eight weeks. The treatment was to paint the part with iodine, and apply linseed poultices. About June an abscess formed under the patella, and was lanced on the inner side of the knee. Subsequently another abscess formed and broke about an inch below this.

At the time of his admission his condition was as follows: He was pale, with hectic fever. Tongue coated; appetite poor; bowels constipated. His face indicated great suffering, and the least movement of the bed or limb caused him great suffering.

The knee joint was found to be greatly distended with pus, which escaped in small quantities through the sinuses at the inner side of the joint. Drainage, however, was quite inadequate. The patella floated, and the serous membrane pouted in all directions. It had evidently ruptured superiorly, as a very large fluctuating abscess occupied the front of the thigh under the quadriceps extensor as high as its middle. This abscess had further ruptured through the vastus externus, so as to point under the skin a short distance above the knee.

On Sept. 14th an attempt was made to reduce the size of the abscess by free drainage. It was pretty clear that the disease was so extensive and of so septic a character that an exsection of the joint was out of the question, and to do an amputation with a large septic abscess occupying the front of the thigh as high as its middle would involve a great loss of bone, as well as greatly endanger the patient's life. Four free incisions were accordingly made into the extensive abscess cavity, and drainage tubes of large calibre inserted. The result was an immediate fall of the temperature, with a general improvement in the patient's condition. The internal lateral ligaments of the joint were found to be entirely disintegrated, and the surface cartilages of the femur and tibia were widely eroded.

Oct. 14th. The abscess above the patella having now contracted to the dimensions of a sinus, an amputation was performed in such a way that this sinus came between the flaps. The whole sinus was then freely dissected out. The wound healed kindly, and the patient's general health immediately became satisfactory.

Condition of parts found. The articular cartilage of the internal condyle of the femur was found to be widely eroded, though the bone beneath did not seem to be greatly softened. The cor-

responding surface of the external tuberosity of the tibia was similarly eroded, as was also the under surface of the patella.

The structures at the inner side of the joint seemed less eroded, probably from the circumstance that the disintegration of the internal lateral ligament prevented close friction at that part. The whole space of the joint was filled by the soft, pulpy granulations of the synovial membrane, and this condition also extended widely through the ligaments and under the quadriceps muscle. The sawn surface of the femur showed an atrophic condition of the compact layer of bone, with a softened and porous state of the spongy portion.

The epiphyseal cartilages were wholly unaffected.

A large pocket of pus (unsuspected) was found in the calf of the leg.

Discussion by Drs. Primrose, Cameron, and Oldright.

A CASE OF ENLARGED GLANDS IN THE NECK.

Presented by G. A. Peters, F.R.C.S.

Query: Hodgkin's disease on Tubercular Adenitis.

M.A. Male. Age fifteen. Admitted under my care in Toronto General Hospital in October, 1898. The family history shows consumption on the father's side, two sisters dying of consumption; and also on the mother's side, one sister dying of consumption. Seven brothers of his mother also died in infancy, the oldest reaching the age of four years. Father and mother are both living and healthy. The patient has one sister living and healthy at the age of thirteen. During childhood the patient suffered several attacks of remitting fever, extending over a period of two years, then he had a severe affection of the eye which kept him in a dark room the whole of one winter season (probably phlyctenular ulceration). In his eleventh year he was five weeks in bed with malarial fever. Since then he has been comparatively well until the present condition manifested itself. Nine months ago he first noticed a lump growing under his ear, which kept getting larger. About this time he had some growth removed from his throat; probably enlarged tonsils or adenoids. When admitted to the Hospital he had the appearance of a fairly well nourished lad of fifteen with a series of tumors in the left side of his neck. The highest one was situated between the angle of the jaw and the mastoid process, and was about the size of a walnut. It was evidently a gland, and could be moved with tolerable freedom beneath the sterno-mastoid muscle. Another small gland as large as an almond was felt in front of this

and extending down to the region of the carotid vessels, and a series of smaller glands could be felt extending down in front, beneath and behind the sterno-mastoid muscle, and extending as low as the clavicle. These glands were tolerably discrete and quite freely movable, and did not seem to be closely matted together. In none of them could any softening be felt. The spleen was not enlarged, and no other groups of glands in the body showed any enlargement. The blood count showed in each c.m.m. from ten to twelve thousand white, and about six million five hundred thousand red, corpuscles. The hæmoglobin is normal in amount.

Clinically, in this case the diagnosis lay between tubercular enlargement of glands and Hodgkin's disease, or malignant lymphoma. In favor of Hodgkin's disease may be mentioned the fact that the groups of glands were those of the anterier and posterior cervical triangle, which are those most usually affected in Hodgkin's disease, tubercular adenitis affecting the submaxillary group of glands by preference.

Again, the glands seemed to be discrete and tolerably freely movable, not being matted together. There was no softening found even in the largest one, which was just under the ear, such as one would expect to find in so large a tubercular gland. The blood count did not seem to offer any considerable help in diagnosis. Moreover, the boy had not the appearance of a tuberculous patient. On the contrary, the absence of any enlargement of other groups of glands in any other part of the body might be looked upon as being in favor of tuberculous adenitis.

At the time of operation, however, it was found that there was much more fusion between the groups of glands than was expected, and that some of them contained spots apparently in process of caseation. According to Osler, caseation is not common in Hodgkin's disease, but a condition of necrosis very like it sometimes was present. There were no evidences, however, of suppurative process in any of the glands. One small calcareous mass was found.

Under the microscope it is seen that the disease is undoubtedly tubercular, but the caseation has an unusual degree of consistence, as if occurring very slowly. Giant cells and epithelioid cells are found in great numbers, but no tubercular bacilli were detected.

Discussed by Drs. Cameron, McPhedran, Primrose and Graham.

(Continued in next issue.)

Book Reviews.

THE ESSENTIALS OF HISTOLOGY. By Edward A. Schafer. F.R.S., Professor of Physiology in University College, London. New (5th) edition. Revised and enlarged. Octavo, 350 pages, with 325 illustrations. Cloth, $3.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

This book is written with the object of supplying the student with directions for the microscopical examinations of the tissues, and is divided into forty-six lessons preceded by a short but comprehensive introduction and followed by an appendix on methods of preserving, cutting, and staining.

The essentials of histology are here got out in such a manner as to enable the student to easily grasp them, beginning with cells, going through the various tissues, and ending in the complex organs. The illustrations, 392 in number, are good, up to date, profuse, and to the point.

Discussion of theories is aptly worded and only generally accepted views expressed.

PRACTICAL URANALYSIS AND URINARY DIAGNOSIS.—A manual for the use of physicians, surgeons and students, by Charles W. Purdy, M.D., LL.D., Queen's University; Fellow of the Royal College of Physicians and Surgeons, Kingston. Professor of Clinical Medicine at the Chicago Post Graduate Medical School; author of "Bright's Disease and Allied Affections of the Kidneys," also of "Diabetes, its Causes, Symptoms and Treatment." Fourth revised edition, with numerous illustrations, including photographic engravings and colored plates. The F. A. Davis Company, Philadelphia, New York, Chicago, publishers, 1898.

We have referred to some of the excellent features of former editions of this admirable book. It is somewhat remarkable that three large editions have been exhausted within three years. The work has been adopted as a text-book in upwards of sixty medical colleges of the United States. Many chapters have been so thoroughly revised and changed as to be practically new. The book is an excellent one from all points of view and well-worthy of the author, a Canadian, and a graduate of Queen's University, Kingston, who has so highly distinguished himself in Chicago.

INTERNATIONAL CLINICS : A quarterly of clinical lectures on medicine, neurology, surgery, gynæcology, obstetrics, ophthalmology, laryngology, pharyngology, rhinology, otology, and dermatology, and specially prepared articles on treatment and drugs. By professors and lecturers in the leading medical colleges of the United States, Germany, Austria, France, Great Britain, and Canada. Edited by Judson Daland, M.D. (Univ. of Penn.), Philadelphia, Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania ; Assistant Physician to the Hospital of the University of Pennsylvania ; Professor of Clinical Medicine in the Philadelphia Polyclinic ; Fellow of the College of Physicians of Philadelphia. J. Mitchell Bruce, M.D., F.R.C.P., London, England, Physician to and Lecturer on the Principles and Practice of Medicine in the Charing Cross Hospital. David W. Finlay, M.D., F.R.C.P., Aberdeen, Scotland, Professor of Practice of Medicine in the University of Aberdeen ; Physician to and Lecturer on Clinical Medicine in the Aberdeen Royal Infirmary ; Consulting Physician to the Royal Hospital for Diseases of the Chest, London. Eighth series 1898. Volumes I., II., III. Philadelphia : J. B. Lippincott Company. Montreal : C. A. Roberts, general agent for Canada. Toronto : A. P. Watts & Co., 10 College street.

Vol. I. of the series of 1898 is a most practical volume. The International Clinics supply to the general practitioner a ready means of keeping in touch with the advance of medical work in America and Europe. The busy medical man must needs read, and, his time being limited, the reading which covers the greatest field with brevity is of most value to him. These clinics are essentially practical, and are selected by the editors for their general interest.

The opening clinic is by Prof. Jaccoud, of Paris, on "Contraindications to the Use of Salicylate of Sodium in the Visceral Manifestations of Acute Inflammatory Rheumatism." He points to the high mortality in these acute cases when treated by salicylate of sodium throughout. He disputes the statement that the use of the remedy prevents the occurrence of cardiac-pulmonary manifestations, and quotes statistics to prove the fact. He advises that in cases treated by this drug the treatment be changed as soon as any visceral tendency is discovered. The clinic is of most practical value.

A clinic by Dr. Nestor Tirard, of London, on "Digitalis as a Diuretic," and one by Dr. J. S. Todd, of Atlanta, Ga., on "Opium," each is exceedingly practical and of great use.

The chapter on "Varicose Veins and Congested Ulcers, etc.," is by Mr. Ernest Wayland, of Glasgow. He believes in the operative treatment for the veins, and, when undertaken, should be complete and thorough. He advocates massage of the congested ulcers, etc.

Prof. Marfau, of Paris, has a lecture on "The Treatment of Whooping Cough." He describes the disease as one of specific contagion. He gives the treatment as belladonna and tolu, after Cadet de Gassecourt ; in children over seven, after Roger, as belladonna, valerian and digitalis. He extols bromoform, and gives it in mixture. We have

had more success with the remedy, however, when administered by dropping on lump sugar. The whole volume is filled for 350 pages with just such practical lectures.

Vol. II. "The Treatment of Functional and Lateral Curvature," by Dr. James K. Young, is a strong advocacy of the exercise and massage treatment. It is profusely illustrated and most complete. At the present time, when the Calot operation is undergoing investigation, the appearance of such lectures as this is most opportune.

Dr. Sett Scott Bishop, of Chicago, in "The Operative Treatment of Sclerotic Catarrh of the Middle Ear," advocates the use of the vibrator to break up the adhesions of the ossicles and other operative treatment.

Prof. C. A. Ewald, of Berlin. "Some Forms of Gastralgia" is an exceedingly practical lecture on a most common affection. He indicates the *modus operandi* of his examination, and in the clinic refers to those cases of gastric neuroses especially.

A most interesting and unique case of appendicitis is described by Dr. W. W. Keene.

"Syphilitic Stricture of the Rectum" by Mr. T. Pickering Pick, of London, is very complete. He points to the consensus of opinion as to the disease by a tertiary manifestation. He does not concur in this opinion, and advances very cogent (to us) reasons for not agreeing. He believes that in women, and a larger percentage occurs in women, that it may be a chancrous ulceration extending from the vagina. And this he believes to be a reason why females are so much more prone to syphilitic strictures than males.

Dr. Henry C.Coe, of New York, on "sterility," offers most excellent advice in the course of his lecture, and that is to examine the husband before the wife, and exclude him from being the cause of the barrenness. The whole lecture abounds in advice that should be followed closely. Be thorough, do not magnify minor details, acknowledge frankly if a negative result is arrived at. The lecture is one of the best in Volume II.

Volume III. Dr. Lewis H. Adler, of Philadelphia, in a lecture on "External Hæmorrhoids," with special reference to their treatment. We are surprised that the lecturer has not heard of the use of the clamp and cautery in these cases.

Dr. J. C. Webster, of Montreal, in some observations regarding the treatment of the condition generally known as "anteversion" and "anteflexion," embodies some very good advice. He recalls the fact that the position of the uterus is not absolutely uniform, that too much unnecessary treatment is done, and frequently a pathological condition is diagnosed without existence.

"The Diagnosis and Treatmeat of Ocular Headache," by Casey A. Wood, of Chicago, refers to a condition that is so very, very frequent, and so often overlooked that we read his advice with much profit.

The series is improving year by year.

MEDICAL DISEASES OF INFANCY AND CHILDHOOD. By Dawson Williams, M.D , London ; Fellow of the Royal College of Physicians, London, and University College, London ; physician to the East London Hospital. One 12mo. volume, pp. 629, with illustrations. Lea Brothers & Co., Philadelphia.

The author has confined himself in this work to the consideration of those diseases and marked conditions peculiar to infancy and childhood, leaving out altogether pathological processes essentially the same in children as in adults. The result is a book moderate in size, and yet sufficiently full and clear to be what the author intended—a guide to the young practitioner or beginner in the clinical study of disease in infancy and childhood. While there are many extensive works on diseases of children, yet there is a constant demand from senior students and recent graduates for a work such as this of Dr. Williams'. The book is written in a way that inspires confidence in the opinions expressed by the author. The photographic illustrations are a useful feature of the work.

THE PHYSICIANS' VISITING LIST (LINDSAY & BLAKISTON) FOR 1899. Forty-eighth year of its publication. Philadelphia : P. Blakiston's Son & Co., 1,012 Walnut street.

This is deservedly one of the most popular visiting lists published One of its chief virtues is the size, which is such that it will easily go into any breast pocket. In addition to the ordinary pages for lists of patients, charges, and special memoranda, we find a calendar for 1899 and 1900, a description of the metric decimal system of weights and measures, a table for converting apothecaries' weights and measures into grams, dose tables, directions for treatment of asphyxia and apnœa, a comparison of thermometers (from Gould's new medical dictionary), and a table for calculating the period of utero-gestation. It is complete and compact. We have much pleasure in recommending it highly.

DISEASES OF WOMEN. A text-book for students and practitioners. By J. C. Webster, B A., M.D. (Edin.), F.R.C.P. Ed., Demonstrator of Gynæcology McGill University ; Assistant Gynæcologist Royal Victoria Hospital, Montreal ; late Senior Assistant to the Professor of Midwifery and Diseases of Women in the University of Edinburgh, etc. Illustrated with 241 figures. Young J. Pentland : Edinburgh and London. Montreal : Wm. Drysdale & Co., 1898.

The author of this text-book is a Canadian, a native of New Brunswick, who received the greater portion of his medical education in Edinburgh. After graduating he remained some time in Edinburgh, during the greater part of which he was engaged in original research. Much of his good work in this respect has borne fruit, as may be seen by a perusal of those chapters which refer especially to the anatomy and physiology of the pelvic organs. Dr. Webster, after spending some years at post-graduate work, decided to return to Canada, and chose Montreal as his abiding place, and was at once attached to the gynæcological staff of McGill Medical College, and also to that of the Royal Victoria Hospital.

The author tells us that he has endeavored to give careful attention to modern researches in sectional and dissectional anatomy, histology, embryology, comparative anatomy, pathology, and bacteriology and has included the results of his own original work for nine years. We have no hesitation in saying that he has done more than well in the direction indicated, and has given us the latest and best views of the modern Edinburgh school. The appendix is rather an important part of the book. In it the author discusses menstruation and its relations to ovulation, conception, etc., and of course gives the Edinburgh opinions. All modern Edinburgh men appear to think that none but an antiquated fossil believes that ovulation determines menstruation. We may say in a general way that from a scientific point of view the book is all that could be desired.

When we come to consider the clinical or practical aspects of the work we cannot speak quite so favorably. The book is too bookish, and not sufficiently practical. A student or practitioner, with his patient before him, might sometimes get bewildered in endeavoring to ascertain from this book what he ought to do, or how he ought to do it. He might, for instance, decide to dilate the uterine canal. How should he do it according to Dr. Webster? It would be somewhat difficult to learn from his book. Among other things three kinds of tents are described; then the author says all tents are dangerous, the most dangerous being the sponge tent. Does he mean that they may sometimes be used in spite of such dangers? We don't know. We had supposed that the sponge tent, at least, had become obsolete. If so, why should so much space be wasted in describing and illustrating it? Another chapter that is hazy is that on pessaries. Like all his Edinburgh confréres, the author displays a most intimate knowledge of the mathematical niceties connected with the physics of the pelvis, but he gives little information as to when we should use a pessary, and what kind we should use. We would like to know, for instance, when we ought to use that barbarous blacksmith's instrument—a Zwanck's pessary, which, we supposed, had fallen into disuse shortly after the Crusades.

If it be conceded that there are certain defects, it may be added they are only slight, and can be easily remedied. The work is likely to be highly appreciated by both students and practitioners, by whom it will be found a safe and valuable guide in the practice of gynæcology.

THE TREATMENT OF SARCOMA AND CARCINOMA BY INJECTIONS OF MIXED TOXINS. By C. Mansell Moullin, London: John Bale, Sons & Daurelsson, Limited.

In this pamphlet of 66 pages we have a timely record of Mr. Moullin's experience of the Coley method of treating malignant neoplasms by means of the toxins of the streptococcus erysipelatis and the bacillus prodigiosus. After a short but clear review of the origin

and history of the treatment—including statements of the heretofore reported cases—the writer gives his own experience. He has treated ten cases with varying success and has no doubt of the utility and propriety of the treatment. We cannot go into a detailed account of the work done by Mr. Moullin, but must highly commend the work (a Harveian lecture, by the way) to the attention of such as may be dealing with new growths. The publisher's work is nearly and well done.

Books received:

HISTOLOGY, NORMAL AND MORBID. By Edward K. Dunham, M.D., Professor of General Pathology, Bacteriology and Hygiene in the University of Bellevue Hospital Medical College, New York. In one very handsome octavo volume of 448 pages, with 363 illustrations. Cloth, $3.25, net. Lea Brothers & Co., publishers, Philadelphia and New York.

A MANUAL OF VENEREAL DISEASES. By James R. Hayden, M.D., Chief of Clinic and Instructor in Genito-Urinary and Venereal Diseases, College of Physicians and Surgeons, New York; Professor of Genito-Urinary and Veneral Diseases in the Medical Department of the University of Vermont, etc. New (2nd) edition, revised and enlarged. In one 12mo. volume of 804 pages, with 54 engravings. Cloth, $1.50, net. Lea Brothers & Co., publishers, Philadelphia and New York.

A TEXT-BOOK ON OBSTETRICS. By Egbert H. Grandin, M.D., Gynæcologist to the Columbus Hospital; Consulting Gynæcologist to the French Hospital; late Consulting Obstetric Surgeon to the New York Maternity Hospital, etc.; with the collaboration of George W. Jarman, M.D., Gynœcologist to the Cancer Hospital; Instructor in Gynæcology in the Medical Department of the Columbia University, etc. Second Edition, revised and enlarged. Illustrated with sixty-four full-page photographic plates, and eighty-six illustrations in the text. Philadelphia, New York, Chicago: The F. A. Davis Company, publishers, 1898.

DISEASES OF WOMEN. A Clinical Guide to their Diagnosis and Treatment. By George Earnest Herman, M.B. Lond., F.R.C.P., Obstetric Physician apd Lecturer on Midwifery at the London Hospital, Consulting Physician-Accoucher to the Tower Hamlets Dispensary, Examiner in Midwifery to the Universities of London and Oxford, late President of the Obstetrical Society of London, and of the Hunterian Society, etc. With 252 illustrations. Cassell & Co., London, Paris, and Melbourne, 1898. Canadian Agents, A. P. Watts & Co, 10 College street, Toronto.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. By W. S. Playfair, M.D., LL.D., F.R.C.P., Emeritus Professor of Obstetric Medicine in King's College, Consulting Physician for the Diseases of Women and Children to King's College Hospital, the General Lying-in Hospital, the Evelina Hospital for Children, etc.; late President of the Obstetrical Society of London; Examiner in Midwifery to the University of Cambridge, etc. Seventh American from the ninth English edition, with seven plates and 207 illustrations. Lea Brothers & Co., Philadelphia and New York, 1898. A. P. Watts & Co., medical publishers and booksellers, 10 College street, Toronto.

Medical Items.

DR. E. A. WHITE has removed from Toronto to Kinmount, Ontario.

DR. R. B. NEVITT, of Toronto, who was seriously ill from erysipelas, is now recovering.

DR. J. J. WILEY, of Dresden, has been appointed associate coroner for Kent county, succeeding Dr. Tweedie.

IT is estimated that there are now 4,500 women practising medicine in America, against 500 twenty-seven years ago.

THE Medical Agency has removed from Ross street to new offices in the Medical Building, cor. Bay and Richmond streets.

THE annual meeting of the American Medico-Pyschological Association will be held in the city of New York, on Tuesday, Wednesday, Thursday and Friday, May 23rd to 26th, 1899.

THE Medical Society of the State of New York will hold its ninety-third annual meeting at Albany, Tuesday, Wednesday, and Thursday, January 31, and February 1 and 2, 1899, under the presidency of Dr. John O. Roe, of Rochester.

DR. L. S. MCMURTRY, professor of gynecology and abdominal surgery in the Hospital Medical College of Louisville, Kentucky, has been elected president of the faculties of the Hospital Medical School and the Louisville College of Dentistry, succeeding the late Dr. John A. Larrabee.

DR. WRIGHT MEMORIAL FUND.—At a meeting of a few friends and admirers of the late Dr. H. P. Wright, held at Ottawa, November 12, it was decided, for the purpose of perpetuating his memory, to establish a fund to be known as "The Dr. H. P. Wright Memorial Fund,' for the benefit of St. Luke's Hospital. In one day $3,000 was subscribed.

THE Southern Surgical and Gynæcological Association previously announced its eleventh annual meeting to be held in Memphis, Tenn., Tuesday, Wednesday, and Thursday, November 8, 9, and 10, 1898, but it has been postponed till Tuesday, Wednesday, and Thursday, December 6, 7, and 8, 1898, on account of the quarantine regulations relating to yellow fever in some parts of the South. Dr. Richard Douglas, of Nashville, is president, and Dr. Wm. E. B. Davis, of Birmingham, is secretary.

TORONTO SANATORIUM FOR CONSUMPTIVES.—The citizens' committee, to which reference was made in our last issue, have elected the following Board of Trustees: Medical practitioners, Drs. J. E. Graham, Charles Sheard, E. J. Barrick, I. H. Cameron, A. H. Wright, William Oldright, W. P. Caven, P. H. Bryce, J. A. Temple and A. A. Macdonald. Non-medical, Messrs. W. R. Brock, George Gooderham, J. Ross Robertson, Hon. George A. Cox, A. E. Kemp, J. W. Flavelle, Ald. Davies, W. Mortimer Clark, Hugh Ryan and Thomas Crawford, M.P.P.

THE Mississippi Valley Medical Association, at its recent meeting at Nashville, Tenn., elected the following-named officers: President, Dr. Duncan Eve, Nashville, Tenn.; first vice-president, Dr. A. J. Ochsner, Chicago, Ill.; second vice-president, Dr. J. C. Morfit, St. Louis, Mo.; secretary, Dr. Henry E. Tuley, Louisville, Ky.; treasurer, Dr. Dudley S. Reynolds, Louisville, Ky. Chicago is to be the next place of meeting. Time of meeting: October, 1899. Date to be determined by the executive officers and the chairman of the Committee of Arrangements.

IT has been stated many times that the Queen of Portugal has taken a regular course of study for a doctor's degree, and actually does medical work for charity among the poor of Lisbon. A correspondent from the Portuguese capital says that this is one of the many little fictions about European royalties that have found general acceptance. If Queen Amélie ever studied medicine, it was quite in private; she has never entered any public class or taken any degree. She has never attempted to practise, although she is warmly interested in hospital work and similar charities. Probably the only royal personage who actually practises as a physician or surgeon is Duke Carl Theodore, of Bavaria. The duke has made a life study of ocular science, and maintains a free hospital in Munich, which he visits daily. It is said that he has performed more than a thousand operations for cataract.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14th, 1899, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published, and must be received by the Secretary of the College on or before May 1st, 1899. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays

will be returned upon application within three months after the award Thomas R. Neilson, Secretary.

The Alvarenga Prize for 1898 has been awarded to Dr. S. A. Knopf, of New York city, for his essay entitled "Modern Prophylaxis of Pulmonary Tuberculosis and its Treatment in Special Institutions and at Home."

POSTPONEMENT OF THE THIRD PAN-AMERICAN MEDICAL CONGRESS.—International Executive Commission of the Pan-American Medical Congress, office of the Secretary, Cincinnati, Nov. 5th, 1898. My Dear Sir: I have the honor to announce that in April, 1898, I received from Dr. Jose Manuel de los Rios, Chairman of the Committee on Organization of the III. Pan-American Medical Congress, a request that, in consequence of the then existing rebellion in Venezuela, no definite arrangements be made at that time relative to the meeting of the Congress previously appointed to be held in Caracas in December, 1899 The following communication relative to the same subject is just at hand. Caracas, September 25th, 1898, Dr. Charles A. L. Reed, Secretary of the International Executive Commission, Cincinnati, Ohio. Dear Sir: After having sent my communication dated April last, I find it to be my duty to notify you that, although the considerations pointed out in it have already ended, our country has been scourged by smallpox, which has taken up all our physicians' activities and time, depriving them of going into scientific works. And, as that state of mind of our people and Government, after such calamities as war and epidemic, would greatly interfere with the good success of our next meeting, I beg leave to tell you, in order that you will convey it to the International Executive Committee, that our Government and this Commission would be grateful to have the meeting which was to take place in Caracas in December, 1899, adjourned for one year later. I am dear doctor, yours respectfully, The President. (signed) Dr. Jose Manuel de los Rios. In accordance with the request of the Government of Venezuela, and of the Committee on Organization, the III. Pan-American Medical Congress is hereby postponed to meet in Caracas in December, 1900. For the International Executive Commission, Charles A. L. Reed, Secretary.

OBITUARY.

DR. ALEXANDER PATTULLO.—By a singular oversight, caused partly by a prolonged absence of one of our editors, we omitted in our September issue to mention the death of Dr. Pattullo, which occurred at his home in Toronto, August 10th, after a lingering illness from cancer. He became licentiate of the Medical Board in 1854, and was engaged in practice for forty-four years. He spent the greater portion of his professional life in Brampton, where he was the leading physician for many years. In 1885 he sold his practice to Dr. Robinson, and removed to Toronto. He was the representative of the Burlington and

Home Division in the Ontario Medical Council from 1866 to 1869. He was an able and accomplished man, a good and successful physician. After coming to Toronto he led a comparatively quiet life; but those who were so fortunate as to know him intimately feel that they have lost a good and generous friend.

CHARLES ROBINSON, M.D., was for many years one of the most active and successful practitioners in Ontario. It is probable that overwork was the main cause of his sudden death, which occurred October 17th. He had just completed a surgical operation, in which he was assisted by Dr. Bowles, of Woodhill, when he was seized with faintness, said to be due to heart failure, and expired almost instantly. He was born at Claude, in the County of Peel, sixty-three years ago, and became a licentiate of the old Medical Board in 1862. He then went to Philadelphia, and became M.D., Jefferson College, in 1863. He then commenced practice in his native place, Claude, and very soon acquired a good reputation and great personal popularity. He was for a time active in politics, and contested Cardwell twice in the Liberal interests, being once returned. In the early eighties he and Dr. Andrew Pattullo, of Brampton, were the most busy physicians in Northern Peel and Cardwell. In 1885 Dr. Pattullo decided to remove to Toronto, and sold his practice to Dr. Robinson, who moved from Claude to Brampton. After this change of residence Dr. Robinson's practice became somewhat different in character, *i.e.*, he did more town work, and less driving in the country. He was, however, ever and always, busy, and literally "died in the harness."

HENRY PUTTENEY WRIGHT, M.D.—Dr. Harry Wright, of Ottawa, was one of the noblest and best beloved physicians that this Dominion has produced. Never did the profession of Canada receive a greater shock than that caused on the morning of October 29th by the receipt of the sad news that Dr. H. P. Wright was dead. He had dined at Rideau Hall on the previous evening. After returning to his home with Mrs. Wright between eleven and twelve o'clock, he went to the house of Dr. Powell, who was entertaining the Ottawa Medical Society. He appeared to be in the best of spirits and enjoying good health. It happened, however, that he had been engaged all the previous night at professional work, and he told a friend at Dr. Powell's house that he felt tired. He reached home between one and two o'clock and remarked to his wife that he felt very chilly and poorly. He took a dose of phenacetine, and then a warm drink. He then said he felt better, and went to bed. A little later his wife noticed that he was breathing heavily and, becoming alarmed, went out of the room and telephoned for Dr Powell, asking him to come over to see her husband. When she returned the doctor was dead, the time then being three fifteen a.m. The cause of death was thought to be heart failure.

Dr. Wright was born in Toronto, January 11th, 1851, and was therefore nearly forty-eight years old. He received the greater portion of

his general education in the High School, Quebec, and his medical education in McGill, where he graduated in 1871. He then practised for a little more than a year at Monctown, a small town near Sarnia. He removed to Ottawa in 1872, and remained there until the time of his death. He very soon acquired an excellent reputation, and became one of the most popular physicians in central Canada. Popularity is, however, a poor word to use in connection with Dr. Harry Wright. He was far more than popular. He was dearly loved, and almost worshipped by a large number of intimate friends and patients. All classes of citizens in Ottawa, from Her Majesty's Representative with whom he spent the greater part of the last evening of his life, down to the humblest and poorest, admired and respected the man for the great good there was in him.

Notwithstanding the laborious nature of his practice, which is said to have been enormous, he was able to pay considerable attention to the Canadian Medical Association, of which he was an ex-president, to various local medical societies, and to certain charitable institutions—especially St. Luke's Hospital. His thorough unselfishness, his uniform kindness and courtesy to others, his strong desires and strenuous exertions for the general uplifting of our profession were recognized and appreciated by the great body of physicians spread throughout the territory extending from Halifax to Vancouver. To Mrs. Wright and the seven dear children who survive we have only to say, the Canadian Medical Profession mourns with you. May God bless you all, and may each child ever strive to be worthy of such a father.

MILTON YOUMANS, M.D.—Dr. Milton Youmans died early in the morning of November 3, at his home in St. Catharines, under circumstances that were peculiarly distressing. While at supper he was eating some apple sauce when a cone-shaped piece of glass got into his throat. The doctor succeeded in removing it with considerable trouble, but during his efforts the throat was badly lacerated. His condition was not at first considered serious, but he gradually grew worse, and, notwithstanding the efforts of several of his confréres, death resulted after much suffering. Dr. Youmans was born in Prince Edward county sixty-one years ago, and received the degree of M.D. from Victoria University in 1866. After practising for a time in Hagersville and Welland, he removed to Picton. From there he returned to the Niagara district, and settled in St. Catharines, where he was successful as a physician, and highly respected by the community.

THE

CANADIAN PRACTITIONER

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PUBLISHERS:
THE PRACTITIONER PUBLISHING COMPANY,
TORONTO.

VOL. XXIII.] DECEMBER, 1898. [No. 12.

Original Communications.

THE SURGICAL TREATMENT OF INSANITY.

BY ERNEST HALL,

Fellow B.C. Gyn. Society, Victoria, B.C.

IN THE CANADIAN PRACTITIONER of April I made a preliminary report upon a case of insanity of two years and ten months' duration which was relieved by removing diseased appendages. It is satisfactory to report at this period, more than nine months since the operation, a continued physical improvement, the patient having gained thirty-five pounds in weight, and what is still better she has been completely restored mentally and is again a useful member of society.

Since treating this case I have examined eleven insane women with the result of finding abnormal conditions of the pelvic organs in nine instances. In six of these cases surgical

measures were adopted with results upon the whole satisfactory. One case of exceptional interest is here given.

PRELIMINARY REPORT.

Mrs. R., aged 52 years, married 29 years, never been pregnant, husband healthy, mother melancholic; one brother committed suicide at the age of 45 after the death of his wife; brother suffered from religious mania and upon two occasions endeavored to take his own life, but for the last twenty years has manifested no indications of insanity. Two uncles of the patient died in Bodmore Asylum, Cornwall.

The patient had been healthy until fourteen years ago, when she suffered from an attack of so-called ovaritis upon the right side. She was considered very sick, and was confined to her bed for six weeks. She had complained of continual pains in the right side. Bowels sluggish.

HISTORY OF THE INSANITY.

Eight years ago the patient first manifested indications of mental disturbance, after reading some religious works on the doctrine (?) of sanctification. As she did not feel as the writer described, she was not "sanctified," and in order to be good she must experience these peculiar sensations. After a few months she became rational again, remaining so until three years ago last February, when she again shewed symptoms of insanity, with similar characteristics. She considered it was her duty to give up everything for the "Lord." She gave away a certain amount of her jewellery. Then the "Holy Ghost" told her she must give up that which was dearest to her; that being her husband, she was asked to give him up and unless she did so she had not reached the desideratum. She told her husband repeatedly that there was a danger of her killing him, as the "Holy Ghost" had told her that since she had made her husband her idol she must kill him. She also attempted suicide, and wandered away from her friend's house and was found near the seashore.

At this time she came under my observation, and upon this finding she was admitted to the Provincial Insane Asylum on June 19th, 1896, where she remained until October 5th, 1898.

Her asylum life was characterized by an intensification of religious delusions, with melancholia. She refused to recognize her husband, and said she was not married, that his wife was dead, etc. She also suffered greatly from insomnia.

One year ago, while visiting the asylum, through the courtesy of the medical superintendent, Dr. Boddington, and with the consent of the husband, I made a pelvic examination under anaesthesia, finding the uterus retroverted, with dense adhesions. I could not determine either right or left ovary.

Upon the result of this examination, I recommended operative measures, but on account of conditions unnecessary to here state I was not allowed to operate until October 5th, 1898.

The patient offered no objections to taking anaesthetic, and the last words she said as I commenced it were: "You look like a preacher; I have no need for you, I have no soul." After commencing the anaesthesia, I gave place to an assistant and prepared for the operation.

Conditions found:

Adhesion of the clitoris with retention of smegma as large as a small pea. Dilated and curretted without finding any abnormality. Abdomen was then opened, and the omentum was found adherent to the parietal peritoneum for about six inches along the median line. The pelvis was one mass of adhesions, and it was with the utmost difficulty I succeeded in freeing the uterus from the sacrum and the bowels. The left ovary and tube were found in a mass of adhesions, and with difficulty were removed. Upon the right side the adhesions were so dense that I was unable even to find the right ovary.

The uterus was brought forward and ventrofixed, and the abdomen closed without any drainage. Convalescence normal; stitches removed on the twelfth day.

RESULTS.

Physical:

Patient rested well after operation; slept a few hours the first night. Second day satisfactory; somewhat restless upon the third day. Sixth day she passed several large concretions of fæcal matter which appeared to have been lodged for some time in the bowel. Ten days after she experienced uneasiness in the bowel, and an examination revealed the presence of several additional concretions—one so large that it required to be forcibly broken before removal.

Patient sat up in bed beginning of third week. Physical condition rapidly improving under tonics.

Mental:

There appeared to be a marked change in the mental condition immediately upon awakening from the anaesthetic. During

the first two weeks her mind would wander for a moment only each day, when she would be instantly checked by the nurse, who could easily get the mental operations back to the realm of reason. Only rarely did she return to her religious delusions. She recognized her husband and discussed plans for the future, and since the beginning of the third week she has exhibited no indications of mental abnormality.

It is a matter of the utmost importance in these cases that the nurse possess mental power sufficiently strong to cope with, conquer, and dispel the slightest indication of any reversion to former abnormal habits of thought and expression. From a very limited observation of these cases I am led to conclude that a vicious mental habit is a factor of no small importance in these cases, and, again, the importance of nutrition must not be overlooked. The best of food, daintily prepared with the most vigorous hæmatinic tonics, should be given. Patients have complained at the Asylum of the fare being not of the most tempting description, and not calculated to whet the appetite and stimulate digestion, but I fail to see how it could be otherwise in a large public institution. Regular evacuations and blood rich in hemoglobin are the best eliminators of ptomaines with which the tissues may have been saturated during years of impaired function and organic agony. In the nine months following the operation upon my first case the patient was transformed from a spare anemic woman to rosy robustness, with an increase of thirty-five pounds' bodily weight.

Let it not be forgotten that surgery is but a part of the treatment in these cases, but the most important part.

IMPRESSIONS RECEIVED ON RECENT EUROPEAN TRIP.*

By Dr. Neu.
London.

To ask one who has been born in this country, who has received his education for the practice of medicine in a small school like the Western University, who has obtained his clinical instruction in a hospital with scarcely a hundred beds, and who has engaged in a limited private practice for three years, what impressions were received when he found himself where hospitals were as numerous as the beds in the one he received his teaching, where one meets with every disease in every degree and stage, is indeed a question which can be approached in many ways.

But as this society has for its object the advancement and improvement of their knowledge and skill in the healing art, only those ideas arising from association with institutions pertaining to that art will occupy our attention.

In Heidelberg an operation for enlargement of cervical glands was interesting as regarded the result, as the enlargement was said to be lymphadenoma. In order to remove all glands affected it was found necessary to divide the right mastoid and dissect up beneath the parotid gland, posteriorly beneath the trapezius, and downwards along the great vessels into the thorax. The internal jugular vein was so intimately connected with and incorporated by part of the enlargement that about two inches of it had to be ligatured off and removed. It was found impossible to reach through the thorax, and as the respiration suddenly ceased about this time the operation was stopped, and after performing artificial respiration about ten minutes the breathing was re-established, the wound was closed, the patient removed from the room more dead than alive, while the complimentary remarks concerning the difficult feat of the operation were numerous, but the autopsy followed in the morning.

*Paper read at the November meeting of the London Medical Association.

In Vienna, which can without doubt lay cləim to having the largest hospital in existence, the eager desire to determine the exact pathological condition of every disease is the paramount consideration. The patients are fully utilized for the purpose of demonstration, instruction and education of those interested in whatever conditions exist.

The thoroughness which the individual investigators display in determining each and every condition which will assist in eliminating a possible, or confirming a probable disease is one great practical lesson. Their enormous, unlimited facilities for observing the exact pathologlcal condition of every fatality, the scope of which is limited only to the facial outline, is the great factor in making Vienna so prominent a headquarter in the study of medicine. No wonder the great and renowed Bilroth acquired here a reputation which, as yet, has not been excelled. No clinician is satisfied without a complete thorough report of the autopsy in which he takes as much if not more interest than in the methods employed to assist nature in repelling the attack, and throwing off the effects of the existing diseased condition. The frequency with which the clinicians refer to and make comparisions with cases presenting certain points of similarity which shewed certain definite pathological conditions is a good, reliable indication of the benefit to be derived from observing the conditions of every necropsy. How often they prove a factor in clearing up an otherwise doubtful case is known only to those who have access to these opportunities.

No matter how simple the case may seem before death one cannot help but notice how complex may be the condition at the autopsy. Is it not important, then, that we, as guardians of health, should instruct and educate the public mind to look upon an autopsy as an important factor in the promotion of health and happiness for the people by assisting in our education and instruction?

In Berlin, through the kindness of the first assistant, I was shewn through the various branches of scientific research under the management of him who a few years ago aroused the whole world by his supposed cure of tuberculosis. I mean Koch. Although his discovery to a considerable extent proved a failure, yet it has proven beneficial in opening new fields for investigations in the line of treatment. All must admit the benefit to mankind of Pasteur's treatment of hydrophobia and the usefulness of antitoxine in the treatment of diphtheria,

which indirectly followed the discovery. At present experiments are in progress to determine some method of serum treatment for almost every disease, but so far no very satisfactory results have been attained. In typhoid the results have not been satisfactory. In streptococcus serum some success has been attained in the treatment of septicæmic conditions and sarcomatous growths.

The marked degree of failure as a cure for tuberculosis by Koch's tuberculin has not altogether disheartened its originator, nor has it altogether proven useless. At present it is being utilized to a great extent as an agent in establishing a tuberculous affection in animals. Reference to this will be made a little later. It is still used in early tubercular affections and in leprosy, if not curing, at least tending to aid the healing process and to limit the extension of the diseased process.

In London and Edinburgh one cannot help but notice the enthusiasm shown and the work done in the science of bacteriology. No clinical report is looked upon as complete without its bacteriological examination. Although there may be an exaggerated tendency to attribute every disease to some organism, yet in some diseases the bacteriological examination is of itself sufficient to establish a diagnosis. All must admit that there are cases of malaria, tuberculosis, gonorrhœal affections, diphtheria and tonsillitis, etc., in which it is impossible to state a definite diagnosis, and which can, if their respective micro organisms be found, be proven to exist with absolute certainty. Not only is it important as a means of diagnosis to confirm a possible disease by a bacteriological examination, but as a guide in the line of treatment.

As an instance of its importance attention need only be drawn to two rather common diseases, but differing greatly in their nature and effects, viz.: diphtheria and tonsillitis. It is acknowledged by all who have given special attention and study to these diseases that there are cases of tonsillitis resembling diphtheria and cases of diphtheria resemble tonsillitis so closely that it is impossible to make a diagnosis certain without a bacteriological examination.

The disease most occupying the attention of the medical minds at present is tuberculosis. Not only are the fields of medicine and surgery agitated, but also those of veterinary and sanitary science. Admitting the possibility of heredity transmitting only a predisposition to the disease, no evidence, as yet, being found

that the disease itself is inherited, the question of its acquirement for some time after birth occupied their attention. It was shown that the three situations most liable to infection were the tonsils which affected the cervical glands, the intestines affecting the mesenteric glands and the air passages affecting the bronchial glands. Taking this as a basis, it has been shown that in the great majority of children under five years of age dying of tuberculosis the disease is contracted by intestinal infection, and milk, forming the basis of food for children, was looked to as a probable source of infection.

A royal commission made quite extensive investigations and found that in Wales one half the cows were tubercular, that the milk of two-thirds of the dairymen in Birmingham contained tubercle bacilli, and that calves fed upon the milk contracted the disease even when no abrasions were present, and they drew the conclusion that all cases of tuberculosis in infants, whether pulmonary, intestinal or tonsillar, were due to the milk. In the treatment of the milk itself there is always one agent at hand to destroy its infective property and render it sterile, but this is not all that is required. One must not lose sight of the fact that cream, butter, cheese, and even the meat of the slaughter ed animal are just as capable to convey the micro-organism. In this, however, as well as all other diseases, prevention is better than cure. The destruction of all animals affected is a safer and more effective means of combatting its aggressions than any treatment of the affected material. This, of course, necessitates the discovery of the disease in the animal, a process as you may readily comprehend is none too easy. It is claimed, however, that by injecting an affected animal with a certain amount of tuberculin a condition is produced quite characteristic—an injection of thirty to forty grams, causing in twelve to fifteen hours, a rise of temperature from one to three degrees.

In Britain laws are being enacted compelling the slaughter of all animals not standing the test, and providing for compensation for their loss. Besides this they are thoroughly renovating their sanitary conditions, not only as regards the source of milk, but also in the treatment of people afflicted.

If our medical brethren across the water have deemed it wise and found it necessary to agitate such procedures in the interests of humanity, is it not our duty to do likewise? In this country it is doubtful if the disease exists to so great an extent as there, but even here there are hundreds who succumb annually to its fatal ravages, and if anything lies within our power to lessen its power it is certainly our duty to do it.

PLEURISY.*

By George Hodge, M.D.
London.

James L., aged about thirty years, married, came to my office on Sabbath, May 19th, 1895, complaining that for the last six weeks he had not felt well, during which time he suffered from a slight hacking cough, loss of appetite, and weakness. His temperature was 101° F., but as my office was uncomfortably cold, I did not strip him for examination. On the following day he called at my office; temperature about the same as on the previous day as were also his other symptoms. I asked him to go home and go to bed and to remain there till I visited and examined him. This I did on the following morning and found evidence of considerable effusion into right pleura. No pain in chest, nor had there been any. Morning temperature 101° F., evening 102° F. Urine normal.

Patient's condition remained much the same till the 29th inst., when I aspirated from right side of chest 60 oz. clear serous fluid. Temperature remained for the most part 101° F. in morning and 102° F. in evening. On June 1st there were signs of effusion in left pleura, followed in a couple of days by a very distinct pericardial rub, which continued for a few days and then disappeared.

On June 4th.—I again removed from the right side, by aspiration, 60 oz. clear fluid.

On June 10th.—I removed from left side 35 oz. of clear fluid. After this the patient was much more comfortable, the temperature became normal in the morning, although it continued to rise a couple of degrees in the evening. Appetite increased. Patient slept much better.

On June 13th.—Removed from right side 60 oz.

June 22nd.—60 oz. from right side. Serum tinged with blood.

*Paper read at the November meeting of the London Medical Association.

July 9th.—Removed 32 oz. of clear serum from left side. After this temperature dropped to normal in the evening. Appetite improved. Patient now gets up and dresses and goes down stairs—feels better in every way.

July 15th.—Removed sixty ounces of blood-stained serum from the right side.

July 29th.—Removed sixty ounces of clear serum from right side. I now applied the following over the right side: ℞ Guaiacol ʒii. tinct. iodi ad. ʒi. m. Urine normal. Patient now suffered from external piles which gave much annoyance and interfered with his sleep and appetite.

August 5th.—Slight swelling of feet and legs which in the course of a few days increased very much, loins were also much swollen. Urine greatly diminished in quantity; sp. gr. 1023, no albumen, no casts. Urine was after this repeatedly examined and never showed albumen or casts.

August 12th.—Removed 80 ozs. blood-colored fluid from right side which in a short time coagulated to a jelly in the vessel. Soon after the aspiration the patient began to cough violently and to expectorate large quantities of frothy serous fluid, which continued till I gave a hypodermic of morphia. Temperature this p.m. 100° and pulse 96.

August 13th.—Did not pass a comfortable night. At 9 a.m. temperature 98½°, pulse 104; was coughing, breathless, feet and legs greatly swollen. Gave a seidlitz powder which produced several watery stools. Urine 12 ozs. in 24 hours. Breathlessness worse in p.m., unable to lie down.

August 14th.—Slept fairly well, but was unable to lie down. Temperature 98½, pulse 102. Removed 60 ozs. of clear fluid from left side. Urine increased in quantity; sp. gr. 1032, acid, no albumen, no casts.

August 15th.—Rested well last night, swelling in feet and legs less, passing more urine. Temperature 98½, pulse 112. Gave tinct. digitalis, min. x., every three hours.

August 17th.—Temperature, 9.30 a.m., 99½, pulse 100. Pulse intermits, missed every third beat, coughing a great deal.

August 21st.—Has been quite comfortable since the 17th inst. 9 a.m. temperature 98, pulse 96, regular, breathless. Removed 70 ozs. of straw-colored fluid from right side. ℞ Pil. triplex, *i.e.*, hydrarg. mass. 1 gr., aloes 2 gr., podophyllum resin ¼.

August 23rd.—Removed 45 oz. clear fluid from left side. Legs and face swollen; bowels loose.

September 2nd.—General œdema. Temperature, 98½. Removed 50 oz. of clear fluid from right side.

September 11th.—Urine still very scanty; patient has persevered with pil. triplex, notwithstanding that it produces a great many watery stools daily; œdema very considerable. Fluid in peritoneum. Removed 65 oz. of yellowish fluid from right side of chest.

September 21st.—Patient has continued much the same. Temperature usually normal, never elevated more than 1° F. Urine still scanty; very frequent watery stools; appetite good; sleeps well; not much cough. Removed 70 oz. clear fluid from right side. Œdema not so marked. Peritoneal fluid increased.

September 26th.—Feels much better, appetite good. Urine still very scanty. Large amount of fluid in peritoneal cavity. Anasarca less. Removed 45 oz. from left side.

October 7th.—Has improved very much, anasarca much less, so also is fluid in peritoneal cavity. Urine increased in quantity; sleeps well, eats well, very little cough. Removed 60 oz. of fluid from right side.

October 19th.—Patient much improved, œdema quite gone, still considerable fluid in peritoneal cavity. Removed 60 oz. from right side.

October 31st.—Much improved. Removed 20 oz. from left side.

November 13th.—Much improved. Removed 12 oz. from right side; evidently more fluid present, but asperator would not remove it. Still considerable fluid in peritoneal cavity.

January 4th, 1895.—Patient steadily improved till about one week ago, when he had an attack of indigestion. Urine more scanty, no albumin, rather breathless. Aspirated 10 oz. of deep colored fluid from the left side; still fluid in peritoneum. No swelling of feet or legs.

Patient now continued to improve steadily till early in June; he could walk four or five miles without fatigue. All swelling was completely gone, no evidence of any fluid in peritoneum, some dullness over the lower lobes of lungs on both sides, however the breath sounds could be heard over every part of both lungs. Patient now left for the West and I learn from his friends that his health has been unusually good during the last two years.

I aspirated this patient's chest 21 times, 14 times the right side and 7 times the left, removing altogether 1054 ounces, or over 25 quarts.

That the pleuritic effusion was inflammatory in origin, I have no doubt. A question at the time was, "Is the inflammation tubercular in origin?" I had a bacteriological examination of the effusion made, but with negative results.

Unfortunately the injection of the pleural effusion into the peritoneal cavity of a guinea-pig was not carried out.

What is the pathogenesis of the anasarca and ascites? There was neither cardiac nor renal disease.

Dr. Gee in his article on pleurisy in Allbutt's System of Medicine says: "Dropsy, that is to say, anasarca and ascites, sometimes occurs even in acute pleurisy with effusion on one side only, there being no evidence of nephritis or of disease of the heart, and the patient recovering completely in about three months. In such cases the dropsy must be due to stagnation of blood in the right side of the heart."

If as stated by Gee acute pleurisy on one side may cause dropsy, how much more would a chronic pleurisy of both sides be likely to do so, inasmuch as the long continued interference with the circulation would bring about such changes in the capillaries as would lead to their greater permeability and thus we would have not only diminished absorption but also increased transudation of lymph.

234 Queen's Avenue.

Clinical Notes.

CEREBRAL TUMOR IN THE LEFT FRONTAL LOBE.

A Clinical Observation by Dr. Giovanni Viviani, of the Hospital of Crema.

Clinical history. Pandani Stefano, 48 years of age, a farmer of Moscazzano. Nothing worthy of note in the family history Has never had any serious diseases; has never had syphilis; has used wine somewhat excessively. Married at twenty-nine, he has had four children, one of whom was an idiot. Of robust constitution, he has always been industrious, of a frank, jovial disposition. About May 1st, 1897, without apparent cause, he became gloomy and taciturn, complaining at the same time of continuous intense headache, which resisted every remedy. He began to forget the most common things of life and had to stop his work, both on account of the headache and his forgetfulness. Meanwhile the headache became more intense and the patient acquired a kind of reeling in his walk. By the 1st of June the disease had reached the climax of its ascending phase. At this time the patient is markedly emaciated. In his gait there is a wavering, with a tendency to fall in various directions; he does not, however, present Romberg's sign. There is no contraction, paralysis or paresis in the limbs or face. The face is slightly congested, the gaze uncertain; pupils contracted, only slightly sensitive to light and accommodation, but equal. The speech is free and well articulated. All the other senses are normal. Reflexes slightly weakened. Also a slight diminution of the sensibility to pain and touch. General muscular tone somewhat weak. No change in the respiratory or cardiac organs, none in the abdominal organs. Urine abundant, normal in color, density and components; no trace of albumen or sugar.

Asked about his previous history, the cause of his trouble,

the time when it began, or about his present condition, he either does not answer, or answers in monosyllables, confusing dates and persons, things and places. The blanks in his memory are such that he does not remember his age or the time of his birth, or the chief events of his life. He often strangely confuses the recollections of the past with the happenings of the present. There is present a true confusion of ideas. He takes no notice of the children whom he used to be so fond of. He has insomnia. Left to himself, he asks for neither food nor drink. When food is offered to him, he eats, but like an automaton, as if his mind were upon other things. At times he has varying hallucinations; and at pretty long intervals he manifests a tranquil, but chaotic, delirium; at times I perceived slight and disconnected tremors, giving to the arms rapid and quick movements, which would vanish, without any particular attention.

Continuing in this condition, the patient came on the 3rd of June to the Asylum of Crema, where, through the great kindness of the Superintendent, Dr. Ernesto Dergami (to whom I am deeply thankful), I was enabled to follow the progress of the obscure affection. The symptoms remained almost unchanged, only twice there was added vomiting, spontaneous, not attributable to gastric disorders. But on the 14th day of the same month, at 9 p.m., the patient had a stroke of apoplexy, with general paralysis of the limbs and face, followed by very high temperature and profound coma, with complete unconsciousness, during which death took place at 11.30 of the 15th.

It seemed to me not easy to make an exact diagnosis of the above case. If on the one hand the psychical disturbances pointed to a mental affection, on the other hand, the peculiarities of gait, the headache, the slight tremors, pointed rather to an organic cerebral affection, upon which would depend the marked psychical, as well as the other, symptoms. Having granted that, the reasons are obvious for which it seemed nearer the truth to think either of a cerebral abscess or tumor. The intense and persistent headache, as a phenomenon of augmented intra-cranial pressure, was as much an argument for abscess as for a neoplasm. The psychical disorders, the reeling, the tremors, would likewise appear in both. But if, in favor of abscess, there was the rapid rise and fall of the disease, nothing in his history was obtainable to show how it had been produced, no injury to the head, no foci of suppuration, no otitis, no

ocular or nasal affections. Hence it was to cerebral neoplasm that the mind turned, although, on account of the patient's condition, it was not possible to examine the fundus of the eye.

The problem became still more intricate when a search was made for the seat of the trouble. The only guide was the tottering gait. This suggested a lesion of the cerebellum or of the corpora quadrigemina. But, against a lesion of the corpora quadrigemina, there was the want of paresis or paralysis of the ocular muscles, which, according to Nothnagel, generally accompanies the reeling gait in such a lesion. Against the cerebellar seat there was both the want of a true vertigo and the very character of the reeling, which was not the true cerebellar ataxia; also the want of amblyopia or amaurosis, so frequent according to Luys. On the other hand, amid the opinions of neurologists, not entirely unanimous, I could not decide to fix the seat of the disease by the psychical facts alone. In the midst of my doubts the sudden death of the patient took place, and the autopsy enabled me to solve the problem.

Autopsy.—We shall note only the most prominent points. A normal cranium. Dura mater slightly hyperæmic as is also the pia; both of normal thickness. No change in the apparent origin or in the early part of the course of the cranial nerves. A large hæmorrhagic softening in the internal portion of the two cerebral peduncles and the upper portion of the pons. On a closer examination of the upper surface of the frontal lobe on the left side, the convolutions are seen to be slightly flattened. There is, however, no inflammatory process which could make the pia adhere to the brain substance. No ventricular dropsy, no atheroma of the cerebral arteries. Systematic incisions being made into the cerebral substance, the white and grey portions are seen to be somewhat hyperæmic and œdematous. The white matter of the frontal lobe on the left side is occupied by a hard body, of a reddish-yellow color, easily enucleated. When enucleated it appears as an ovoidal tumor, 3 cm. in the longer diameter and 2 cm. in the shorter, occupying the central portion of the præ-frontal lobes in such a manner, however, that its posterior pole does not pass beyond the third frontal convolution. It is slightly adherent to the nerve-tissue round about. The tumor on examination is found to be of almost fibrous consistency, externally of a reddish-yellow color, furrowed by numerous reddish streaks, internally of a yellowish hue, with small blood extravasations. The microscope shows it to be a fibro-glioma.

The psychical symptoms in the patient were certainly due to the presence of the neoplasm in the brain. If we should say then that they were due to the changes in the white and grey matters of the præ-frontal lobe, and not rather to the altered circulation and the increased pressure, we should pre-suppose as solved the problem of the localization of the higher psychical functions—a problem so much discussed and around which great minds are struggling, without being perfectly in accord. From Munck, who avers that the intelligence has its seat diffused over the whole cerebral surface and in no particular region, we come to Pitres, who, in the Congress of Medicine at Nancy in 1896, did not show himself at all favorable to the idea of an exact localization of the intelligence. From Ferrier, who states that the faculty of intelligent and exact observation is situated in the frontal lobes, we come to Bianchi, who, studying the problem for years, maintains that the præ-frontal lobes are the seat of the intelligence.

If we can admit with most of the authorities that psychical symptoms are often served in tumors of the other parts of the brain, we must, however, also admit that they have not great intensity, and appear almost always late when the tumor has already produced other symptoms which prevail throughout the course of the trouble, while in the cases of tumors occupying the frontal lobes, and especially the præ-frontal, such symptoms (psychical) are early and notable, and are prominent throughout the whole duration of the affection.—*Translated from "La Clinica Medica Italiana" by Harley Smith.*

(To be Continued.)

Progress of Medicine.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

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ASSISTED BY

H. T. MACHELL, M.D.,

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L. D., aged twenty-eight, 2-para. Admitted 7th February, 1897. Patient suffering from tertiary syphilis, ulcers on both legs, with extensive sloughing ulceration of labia majora. Scrupulous cleanliness was observed, as far as possible, previous to delivery. No vaginal examinations were made. Delivered next day. Eighteen hours in labor, child still-born; third stage 35 minutes, placenta and membranes came away entire. The vulva was dusted with iodoform. On the morning of the second day her temperature rose to 101° F. The lochia was slightly fœtid, a vaginal douche was given, but the evening temperature was 102.6° F.; the uterus was douched, but nothing abnormal was noticed. R. Quin. Sulph. gr. v., every fourth hour. After this the temperature fell for three days. On the sixth morning the temperature rose to 103⅘ F., and pulse to 115, and in the evening to 105° F., pulse 120. The uterus was curetted with Rheinstadter's spoon, but very little came away; the lower part of the vagina was of a greyish color, covered with a large puerperal ulcer, which was dusted with iodoform. The temperature dropped two degrees for 48 hours, but then rose and fluctuated between 103° F. and 105° F.; the pulse varied from 115 to 146, until the time of her death.

All through the lochia was scanty, except when the uterus was douched, which was done daily. Patient was on from ℥viij. to ℥xx. whiskey daily, but it had little or no effect on the pulse-rate. She became exhausted and died on the 13th day.

Post-mortem examination showed the uterus slightly enlarged,

and covered by a grey, sloughing membrane, which extended into the vagina. Other organs healthy.

From the *post-mortem* examination of this case we think that, in addition to curetting and douching, it might have been beneficial had the uterus been plugged with iodoform gauze, as recommended by Duhrssen.—*Rotunda Hospital Clinical Reports, 1898.*

Effect of an Abdominal Blow.

A diagnosis of rupture of some viscus may be said to be sufficiently certain to justify immediate exploratory incision when a train of symptoms such as the following is presented: excessive amount of shock; extreme depression and weak pulse; nausea, growing considerably worse and leading to vomiting; deep-seated pain in the intestines that is never absent, but shows violent paroxysms of increased intensity; abdominal distension rapidly becoming tympanitic, and a temperature but little above normal, or even at first below it.

J. Whitridge Williams, Associate Professor of Obstetrics, Johns Hopkins University, in an elaborate paper, "The bacteria of the vagina and their practical significance, based upon the bacteriological examination of the vaginal secretion of ninety-two pregnant women," arrives at the following conclusions:

(1) That the vaginal secretion of pregnant women does not contain the usual pyogenic cocci, having found the staphylococcus epidermidis albus only twice in ninety-two cases, but never the streptococcus pyogenes or the staphylococcus aureus or albus.

(2) The discrepancy in the results of the various investigators is due to the technique by which the secretion is obtained.

(3) As the vagina does not contain pyogenic cocci, autoinfection with them is impossible; and when they are found in the puerperal uterus they have been introduced from without.

(4) The gonococcus is occasionally found in the vaginal secretion, and during the puerperium may extend from the cervix into the uterus and tubes.

(5) It is possible, but not yet demonstrated, in very rare instances, that the vagina may contain bacteria, which may give rise to sapremia and putrefactive endometritis by autoinfection.

(6) Death from puerperal infection is always due to infection from without, and is usually due to neglect of aseptic precautions on the part of the physician and nurse.

(7) Puerperal infection is to be avoided by limiting vaginal examinations as much as possible and cultivating external palpitation when vaginal examinations are to be made. The external genetalia should be carefully cleansed and disinfected and the hands rendered as aseptic as if for a laparatomy. Vaginal douches are not necessary and are probably harmful.—*Am. Jour. Obs., Oct, 1898.*

At Edinburgh, Dr. A. Martin (Berlin) commented on the tendency to neglect the teaching and practice of midwifery in favor of gynæcology.

Clamp and Ligature in Vaginal Hysterectomy.

I believe that a judicious combination of clamp and ligature will ultimately become the usual method adopted.

F. J. McCann,
Samaritan Hospital.

Abortions.

There were sixty-two cases of abortion admitted during the year. Some of these required no special treatment; only those in which the hæmorrhage was severe, or in which any part of the ovum was still retained, were interfered with. In all these cases the treatment adopted was the emptying of the uterus—if possible by expression of the contents. This failing, and the os being sufficiently dilated, the ovum was removed by the finger, or, if the latter condition was not fulfilled, by Rheinstadter's curette.

In one case the cervix was cicatricial owing to a previously performed Schroder's amputation, and as a result there was stenosis of the external os; it was dilated with Hegar's dilators, and a four months' fœtus extracted by means of Schultze's spoon-forceps. The patient's temperature rose on the evening of the sixth day to 104.6°, and after a uterine douche fell to normal, and remained so.

In another case the patient was admitted with hæmorrhage, which had been constant for two months previously. The uterus was up to the umbilicus, and she stated that she was three and a half months pregnant; no fœtal parts could be felt. The os was dilated by means of laminaria tents, a large quantity of clots escaped, and the patient coming into labor was delivered of a four months' fœtus. Convalescence normal.

In another case the patient was admitted in the fourth month of pregnancy, with a fœtid discharge. The membranes were ruptured,

and the fœtus could be felt lying partially in the dilated cervical canal. As the os externum was only the size of a threepenny piece it was divided bilaterally, and the fœtus extracted by Schultze's spoon-forceps. Free hæmorrhage followed its removal; the uterus was curetted and plugged with iodoform gauze. Convalescence normal.

In another case the remains of an incomplete abortion were removed from one horn of a bicornuate uterus.

PSYCHIATRY AND NEUROLOGY

IN CHARGE OF

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The Syphilitic Etiology of Locomotor Ataxia.

Dr. Harrison Mettler, Chicago, in the *Alienist and Neurologist* demonstrates the untenability of the view that all cases of locomotor ataxia are the result of syphilitic infection. Marie, of Paris, goes too far, he thinks, when declaring that tabes is nothing more or less than a sequel of syphilis. It is admitted, and it is easily demonstrated, that spinal syphilis and locomotor ataxia are widely different affections. Even the ataxia of spinal syphilis differs from the ataxia of tabes. All the other symptoms are sufficiently unlike in the two affections to indicate clinically their pathological differences. This being so obviously the case, the advocates of the syphilitic etiology of tabes have had to fall back upon the statement that the degenerative process of the disease is merely the result, more or less remote, of the action of the specific virus upon the delicate nerve structures. They say the toxæmia of the syphilitic diathesis somehow affects the histological elements of the nervous apparatus, especially the sensory apparatus, so that their nutrition is impaired and they undergo degeneration.

This explanation of the post-syphilitic nature of tabes proves, the writer asserts, too much, for the advocates of this view must demonstrate that the syphilitic toxæmia is the only blood dyscrasia that can cause the degenerative process observed in tabes. Does syphilis set up any other degenerative process beside that of locomotor ataxia, and if so, why does it not do it as often as the advocates of its etiologic importance declare it does in locomotor ataxia? Why does it select the sensory apparatus, as it seems to do in this disease? If the syphilitic poison is always the cause of locomotor ataxia, wherein does it differ so much

from other severe toxæmias, such as ergotism for instance, that it and not any other form of blood poisoning should produce the degeneration of locomotor ataxia? Or, on the other hand, what is it in the nervous elements that should induce them to yield always to the syphilitic and not to any other form of toxæmia? These are some of the questions that the advocates of the syphilitic etiology have left unanswered. They tell us that the degeneration of the nerve elements is produced by the specifically poisoned blood; some of them declare that this poisoned state of the blood operates by lowering the nutrition of the nervous structures; but none of them so far have informed us how the syphilitic toxæmia *alone* is capable of doing all this. To uphold syphilis as the *sole* etiologic factor of tabes, they must demonstrate that the syphilitic is the only virus that can directly light up a degeneration of the nervous elements or indirectly affect their nutrition so as to bring about their ultimate degeneration. Until they can do this positively and clearly, and in view of the fact that statistics from reliable sources show that locomotor ataxia is due to specific infection in from five per cent. to ninety-five per cent. of cases, I do not think we are yet justified in stigmatizing a tabetic patient who may be dealing honestly with us in denying infection, with the charge of having so foul a disease whether acquired knowingly or unknowingly. The *syphilitic* origin of *all cases* of locomotor ataxia has not yet been sufficiently established to warrant us in making so dogmatic an assertion.

The newer histology of the nervous system and the newer pathology of tabes dorsalis seem to Mettler to upset the theory, on *a priori* grounds of the syphilitic origin of *all* cases of the disease. A knowledge of the sensory neuron, its anatomy and its physiology, is essential to the conception of the pathology of tabes. This particular form of neuron consists of a central body with two long processes extending out from the body in opposite directions and terminating in brush like arborizations in the skin and posterior columns of the cord respectively. The body of the neuron situated in the posterior spinal ganglion is supposed to subserve somehow a nutritive purpose to the neuron, and, in view of the fact that the newer pathology makes of locomotor ataxia essentially a disease of mal-nutrition, a confirmation is thus afforded of the theory of Marie, Deferine, Obersteiner, Redlich and others who long ago located the primary source of the disease in the posterior ganglia.' The nutrition of the

neuron being thus affected, it naturally follows that its delicate, distal extremities, the cutaneous and medullary arborizations, should reveal the strain first and undergo degeneration. This explains the peripheral character of many of the symptoms of tabes such as the ataxic gait, the anæthesia, the pains, on the one hand, and the central character of many other symptoms, such as the ptosis, cranial nerve disturbances, myosis, optic atrophy, etc., on the other. The crises are probably peripheral manifestations, though they may be of a central origin through implication of the medullary neuclei.

This peripheral character of the pathology of locomotor ataxia—peripheral in relation to the central neuron body—is receiving stronger recognition day by day. The degeneration travels along the neuraxons and is centripetal in relation to the neuron bodies. Its simultaneous appearance in the peripheral arborizations of the sensory neurons gives to the disease its hitherto unexplained peculiarity of manifesting simultaneously cutaneous and cordal pathological changes. The old idea of an upward degeneration in the cord must be abandoned, and the more or less simultaneous degeneration of mal-nutrition in the neuron terminals of skin and cord be accepted.

Though this nutritional disturbance is probably dependent upon some disturbance of function in the neuron body, located in the posterior spinal ganglion, it is primarily due to one of three factors, viz., (a) toxæmia (including syphilis); (b) exhaustion (overwork); and (c) traumatism (including such factors as cold, damp, etc.). To these causes must be added also heredity, for the neuron body must have inherited a normal structure ere it could have performed its functions normally. Freidreich's disease is thus accounted for, as well as its close relationship to ordinary locomotor ataxia

The whole question presents itself somewhat thus: Given a normal nervous system in a healty individual without hereditary taint. In such an individual a progressive degenerative process may be started up (1) by direct injury (traumatism) including such factors as cold, damp, etc., (2) by overwork of the nervous elements (exhaustion) and (3) by certain blood states (toxæmia) including syphilitic and other forms of infection such as alcoholism, ergotism, etc. Of the toxæmic and in fact of all the three sets of causes enumerated, the syphilitic is without doubt the most common; because probably under these circumstances the highest degree of blood poisoning,

acting for a long period of time, is brought in relation with the sensory, the most delicate and highly organized part of the nervous apparatus. In other words the muscular sense being the last acquisition in the evolution of the sensory functions of the race and therefore the first that would be liable to succumb to any unusual strain, the power of resistance is probably less in the sensory neurons than in the other neurons, to the prolonged action of the syphilitic virus. On the other hand there is probably a higher degree of virulence in the syphilitic virus towards the nervous elements than there is in most of the other varieties of toxæmias. That some syphilitics do not acquire tabes is explained on the ground that either the virus in their case is not sufficiently active, or if it be sufficiently active the inherited vitality of the nervous elements is so vigorous as to be able to resist the action of the syphilitic poison.

The above explanation, Dr. Mettler thinks, is the true one of the so-called selective action of the syphilitic and other poisons in locomotor ataxia. Upon no other ground can he understand how in this disease the nerve terminals within the muscle-spindles are always found to be degenerated, while the intervening nerve trunk lying between the muscle-spindle and its corresponding posterior ganglion remains normal. These muscle-spindles which Sherrington, Battin, Ruffini, and others have proved to be of a sensorial character, to be closely related to the posterior ganglia and to be probably subservient in some way to the very elaborate and highly specialized function of the muscular sense and sense of position, and which are always degenerated in locomotor ataxia, but not in any other disease with the same regularity, are in all likelihood the most delicate and most readily injured part of the entire nervous system. Upon these delicate structures the syphilitic and occasionally other toxæmias act harmfully; they yield and undergo degeneration, and so seem as though they were *selected* by the poison. The selective action is not in the poison but in the lessened power of resistance on the part of the sensory elements.

But do toxæmic conditions, other than syphilis, start the degenerative processes of locomotor ataxia? They certainly may do so, if the above explanation of the pathology of the disease be correct, and if the toxæmia be sufficiently virulent, and the sensory neurons sufficiently debilitated by heredity or other cause. Not only *may* they do so, but, in the writer's opinion, they most certainly *do* sometimes do so. And here is where we

are to classify those cases which, in the absence of a syphilitic history, can only be attributed to such manifest, general cachexias as malaria, rheumatism, alcoholism, ergotism, arsenicism, etc.—especially when these are conjoined with such exciting causes as cold, damp, muscular exertion, etc.

To summarize: Those who believe that syphilis is *always* the cause of locomotor ataxia depend largely upon hospital statistics, but hospital cases would, for obvious reasons, give a large percentage of syphilitic cases.

Those who believe that syphilis is *always* the cause of locomotor ataxia must, in order to maintain their thesis, present a large number of consecutive cases in which syphilis has been positively established. The simple fact that percentages of syphilitic locomotor ataxia vary amongst authorities from five to ninety-five shows that there is no uniform method of tabulation among them, or that their observations must have been made upon very different classes of patients.

Those who believe that syphilis is *always* the cause of locomotor ataxia must prove the reason for and nature of the so-called selective action of the syphilitic virus on the sensory apparatus. They must show why it does not affect in a similar way the other parts of the nervous system. If, in their explanation, they fall back upon the extreme virulence of the syphilitic toxin and the readier susceptibility of the sensory system, they must show why any other extremely virulent toxæmia may not similarly affect a vitiated nervous system, and set up in the sensory apparatus the same sort of degeneration that syphilis does in tabes. In a word they must deny, and at the same time show cause for their denial, that any form of toxæmia other than the syphilitic *can* accomplish what they so dogmatically declare the syphilitic toxæmia accomplishes in *all* cases of locomotor ataxia. When a man with locomotor ataxia, for instance, denies having had syphilis, but gives a clear history of chronic alcoholism with exposure to damp and cold, they must not only prove absolutely the presence of the syphilitic taint, but they must or should demonstrate, upon some histological or chemical basis in connection with the so-called selective action of the virus, why they prefer to believe in the denied syphilitic etiology rather than in the confessed alcoholic etiology. More than this, they must prove the presence of syphilis and its selective action in a reasonably large number of consecutive cases.

Until they do this they are not justified in attributing *all* cases of locomotor ataxia to specific infection. Nay, more, in view of the newer pathology of locomotor ataxia, we may safely say that *not all* cases of locomotor ataxia are due to syphilis.

A Case of Cerebral Ataxia, affecting chiefly the right upper extremity with marked involvement of the Stenognostic Sense.—Dr. Ingersoll Olmsted, Hamilton, Ont., reports a highly interesting case in November *Journal of Nervous and Mental Disease*, N.Y. The patient, a clerk, aged twenty-seven years, had previously history free from disease. He is a well-developed man of medium size and intelligent, but slightly nervous. Parents had been both troubled with rheumatism during life. One ancestor said to have been insane. One brother died at thirteen from paralysis, following measles. One sister living, aged thirty-three, is very nervous. Patient denies ever having had syphilis. Three years ago, while riding a bicycle, he had a collision with another rider going an opposite direction, was thrown from his wheel, part ally stunned, and received a contusion of one eye, but does not remember which one. He was sore for a few days, but felt no effect from his accident. Has used alcohol very moderately, but tobacco in excess at times. Since July 15th he has felt numbness in right thumb and fingers. Sensation in right side of face, described as a flash, and says it is a pricklish, warmish feeling, beginning at the upper lip and extending to eye and ear. It passes off in a few seconds to return in four or five minutes. While his attention is drawn to it, he thinks, this sensation comes more frequently. Has never felt anything similar in right leg. Has been treated by Dr. Osborne for diplopia, which disappeared, but returned again the day before the prickling sensation was noticed in face. Owing to numbness in fingers found difficulty in writing. Skin is normal and no evidence of syphilitic lesion to be found. No tenderness over the nerves of the face or of the extremities; no affection of hearing. Tongue is protruded in median line. No affection of taste. Examination of heart, lungs, abdominal organs and cranium is negative. Urine contains neither albumen nor sugar. Eye movements in all directions are good except slight lateral nystagmus on either side. Pupils are equal and respond normally to light and accommodation. The facial and mascatory muscles act normally, jaw jerk present. Touch, pain, heat and cold sensation are normal on both sides of face. The muscles of upper and lower extremities had free movement. In

upper extremity the sensations of touch, pain, heat and cold were unimpaired except to very slight degree in thumb, index, and middle fingers of the right hand. The scapular, epigastric, abdominal and cremasteric reflexes are markedly exaggerated on the right side. There also appeared some hyperæsthesia of the right face, arm, and trunk. Knee jerk on left side was present, but on right side was very much diminished and could only be produced very slightly with motor reinforcement. No Romberg symptom, gait and sensation in both legs normal. The patient gradually grew worse; hand and arm felt much stiffer. The numbness affected the whole hand. Says his right leg tires much more quickly than the left. Electric examination showed ready response of all the muscles to faradic current. The condition of his eyes varied; at times there was diplopia, but at others none. The flash or paræsthesia of right side of face became more marked and extended down the right side of neck to right shoulder and arm. There was well-marked ataxia of right arm and hand. When he brings his index fingers together there is difficulty in getting them to touch. When asked to touch his nose with his right forefinger he made the attempt with a certain stiffness and uncertainty, and usually touched the face at a point some distance to the right of the nose; with the fingers of his left hand, however, he was able to execute that movement with precision. When asked to write he took the pen very awkwardly, and had to use the left hand to fix it properly between the fingers of his right hand. The writing was done with slow irregular movements. The letters were tremulously and irregularly formed and quite unlike his former handwriting. The movements of the right shoulder, arm and hand are all carried out with much less dexterity than those of the left.

Sensation to touch, heat and cold is perfect on both sides of the body, while that of pain is dulled in right arm and right side of trunk. The face, neck and leg on the right side are as sensitive to pain as on the opposite side. The most interesting feature of the case is the fact that the stereognostic sense is very much disturbed in the right hand. He cannot recognize a key, piece of money or pen when placed in his right hand, although they were recognized at once when placed in the left. He cannot button on or unbutton his clothes with the right hand. The farado-cutaneous sensibility was already diminished in the right arm, hand, and on the right side of trunk.

He remained (Aug. 17th) in much the same condition except that the stereognostic sense was even more involved—almost completely lost in the right hand. This loss, not associated with actual paralysis, but with a pronounced ataxia, manifested by an inability to carry out accurately finer movements, such as those concerned in writing, buttoning and the like. Disturbance of the stereognostic sense, by no means uncommon in cases of hemiplegia, is an extremely rare occurrence in the manner here reported. As a matter of fact, says the writer, there has thus far been no case to my knowledge reported in which a symptom-complex identical with that of the patient herein described, and with a similar mode of onset (absence of recent trauma), has been observed. Dr. Olmsted reserves his judgment as to the exact localization of the lesion and the exact nature of the disease.

The only cases resembling this one are those reported by Wernicke, VonMonakow, and Burr. Each of those, however, had a history of trauma.

Suicide and Sex.—Dr. Alexander Haig (*British Medical Journal*) treats of "Suicide as a result of error of diet." He believes that mental depression and melancholia are due to defective circulation in the brain, and that this is due to the blood being rendered impure by the presence of uric acid, and that this uric acidæmia, or collæmia, is the result of error in diet, and can be controlled or removed by altering it. He says the great preponderance of suicides in males may be due to several factors: (1) Men are more exposed to weather than women, and exposure may be equivalent to living in a colder climate. (2) Men eat more meat than women. (3) Women excrete large quantities of uric acid every month or just after the menstrual period, so that other things being equal they will have less retention and accumulation than men; this monthly plus excretion accounts for the fact that when they do commit suicide it is often just before the monthly period. Again, women suffer much less than men from gout on the one hand and stone and gravel on the other. The uric acid, stored or retained in the rapid nutrition of girls about thirteen or fourteen years, which comes to an end about sixteen or seventeen years, passes through the blood about and after these latter ages and accounts for the blood and circulation changes which may end in chlorosis, headaches, depression, epilepsy, or suicide. The opposite side of this picture is the rapid nutrition and retention of

uric acid at thirteen years, with the acute rheumatism it produces; in such girls we often get a complete alternation of rheumatism and anæmia, with headache, epilepsy, depression and suicide as more occasional co-results.

Das Echo, in an article drawing attention to the statistics of German schools for the ten years from 1887 to 1896, shows that 407 school children committed suicide. All these cases occurred in State schools; 331 were boys and 76 were girls, each under 15 years of age. Whether or not Germany is more productive than other nations of this horrible modern symptom of child-suicide, it certainly, as *Das Echo* remarks, may be regarded as one of the saddest and most startling of the phenomena of modern social life.

Editorials.

ONTARIO MEDICAL LIBRARY.

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Monthly and semi-monthly: British—Edinburgh Medical Journal. United States—American Journal Obstetrics, Archives of Pediatrics, American Journal Medical Sciences, Alienist and Neurologist, American Journal Insanity, American Journal Physiology, Annals of Surgery, Charlotte Medical and Surgical Journal, Northwestern Lancet, Index Medicus.

Besides fairly complete files of: Birmingham Medical Review, Glasgow Medical Journal, International Magazine, International Journal of Surgery, Brooklyn Medical Journal and others.

Reports and Transactions such as: Johns Hopkins Bulletins and Reports, Trans-Ass'n American Physicians, Trans-Am. Orthopædic Association, Trans-Obstetrical Society, Edinburgh, Guy's Hospital Reports, Trans-London Pathological Society.

Reference Hand-books as: Sajous' Medical Annual, Medical Annual, International Clinics, etc.

Systems of Medicine and Surgery like Treves, Wyeth, Gross, Holmes, Erichsen, Ashurst, Pepper, Fagge, Loomis-Thompson, Albutt, Osler and Twentieth Century Practice of Medicine.

Up-to-date Editions of Works on Special Subjects, as: Kelly's Operative Gynæcology, Hermann's Diseases of Women, Albutt & Playfair's Gynæcology, Pozzi's Gynæcology, Holt's Diseases of Children, Rotch's Pediatrics, Bosworth on Nose

and Throat, Thompson's Dietetics, Foster's Therapeutics, Phelps on Traumatic Injuries to the Brain, Fowler & Godlee on Diseases of the Lungs, Maylard's Surgery of Alimentary Canal, Lawson Tait's Perineal Operations, Greig-Smith's Abdominal Surgery, Jacobson's Surgical Operations, Allingham on Diseases of the Rectum, Deaver on Appendicitis, Hawkins on Diseases of Vermiform Appendix, Osler on Angina Pectoris, Osler on Diagnosis of Abdominal Tumors, Naunyn on Cholelithiasis, Zeigler on Pathological Anatomy, Thoma on General Pathology, Balfour on Senile Heart, and Keating on Diseases of Children.

MEDICAL COUNCIL ELECTIONS.

A GOOD deal of interest was taken in the election in Division 8; and much to the surprise of many, Dr. Armour was defeated by a small majority from one to three, by Dr. Glasgow, of Welland. Dr. Armour is a man of ability and prominence, and his friends will seriously regret his absence from the annual council meetings. Dr. McCrimmon, of Palermo, and Dr. Stuart, of Milton, were both good men. We believe the contest between them largely turned on local issues. As intimated in our last issue, these were the only contests for territorial representation. In addition to Drs. Glasgow and Stuart there will be four new territorial representatives: Dr. J. A. Robertson, of Stratford; Dr. A. A. Macdonald, of Toronto; Dr. Lane, of Mallorytown, and Dr. Powell, of Ottawa. We often had occasion to differ from Dr. Rogers; but we desire to say now, that, by the retirement of this gentleman, the Council has lost one of its most able and independent members. At the same time we feel certain that his successor, Dr. Powell, will prove a most worthy representative of the Ottawa district. The contest between Dr. Britton, of Toronto, and Dr. Ville, of St. Catharines, for the position of representative of the Senate of the University of Toronto caused a ripple of excitement. The former, on account of his unimpeachable record as a representative of eight years' standing, was elected by a good majority. Under other circumstances, Dr. Ville would have made a better showing, as it is generally recognized that he is not only a distinguished graduate of the University in two departments—Arts and Medicine—but also a man of marked ability and influence in the Niagara peninsula. There is also

a certain feeling abroad, which is strong enough to make it worthy of recognition by the authorities of the University, that graduates living outside of Toronto should have a larger voice in the governance of that institution than they have at present.

ST. JOHN'S AMBULANCE ASSOCIATION.

THE members of the Toronto Centre of this association held their third annual meeting November 16th, 1898. Mr. John T. Small, the President, in his opening address, gave a brief history of the parent organization, which was originally established in Palestine, and did excellent work in the middle centuries. In 1888 a royal charter was granted to the association, and the Prince of Wales became the Grand Prior of the order. Although in Canada the association had not a historical reputation, there was much good work which it could do. The objects of the association were to instruct in rendering first aid in cases of accident or sudden illness, transporting the sick and injured, and teach elementary principles of nursing and sanitation.

The report of the Treasurer, Mrs. G. S. Ryerson, was submitted by Dr. Ryerson, who spoke of the progress made by the association in Toronto, which far exceeded the most sanguine expectations of those who promoted it. Thousands of text-books had been sold, and the number of pupils who have attended the lectures was very large. The association is in a good financial position, with a cash balance on hand of $140 Canada is not foremost in the work of disseminating knowledge, especially on "first aid to the injured," Australia and New Zealand being far ahead. In South Africa, also, the association had made great progress, and the reason was, perhaps, not far to seek. The many wars and the frequency with which large bodies of the residents of these countries found themselves shut up in lagers, surrounded by hordes of Matabele and other savage warriors, had demonstrated the practical advantages of the work of the association. In Great Britain a large number of centres of the association are working, and in the colliery districts the beneficial results of the operations of the association had been experienced, and the County and City Councils made generous grants in aid of the work. In Toronto the police force had received a systematic instruction in the work, and Dr. Ryerson strongly urged that it should be made compulsory upon members of the city fire

Correspondence.

NEEDLE IN THE HEART.

MONTREAL, Dec. 1, 1898.

To the Editor of THE CANADIAN PRACTITIONER:

DEAR SIR,—I was much interested in reading the account by Dr. Peters of a case of "needle in the liver." I was reminded of a case which I saw some years ago. A man aged about forty, the subject of suicidal mania, by some means or other escaped the vigilance of his keeper and managed to possess himself of a file and two darning needles, each two and a half inches long. The needles, he thrust, as he thought, into his heart and then drove them home with the end of the file so that they disappeared beneath the skin. This caused him great pain and, although he was not believed, he said he had driven two needles into his heart. I was sent for in the middle of the night and found the patient writhing in agony on the floor. On examining the heart region I saw two punctures in the region of the apex between the fifth and sixth ribs and an elevation of the skin took place near the one over the apex at every heart beat; feeling with my fingers I could make out distinctly the heads of the two needles, the outer one deeper in and not affected by the heart beats, the inner one apparently firmly fixed into the muscle of the heart near its apex and pushing up the skin at every beat. I immediately cut down on the needles, having to go through the intercostal muscles before reaching them and then extracted them with a small needle-holder I happened to have with me—the one fixed in the heart came away with difficulty, the other, which was in the lung, was easily removed. The patient experienced immediate relief, the wounds healed by primary union and in a couple of days the patient was as well as ever. The first needle introduced missed the heart and the second was firmly embedded in the left ventricle; fortunately for the patient it had not entered the cavity of the heart. Hoping you will not think I am growing old and reminiscent, I am, Yours truly,

FRANCIS J. SHEPHERD.

SURGICAL OPERATIONS ON THE INSANE.

VICTORIA, B.C., Nov. 3, 1898.

To the Editor of THE CANADIAN PRACTITIONER:

In the October issue of THE PRACTITIONER appeared an article by Dr. Russell, Medical Superintendent of Hamilton Asylum, upon "The after effects of surgical procedure on the generative organs of females for the relief of insanity," which contained statements somewhat misleading, although, no doubt, wholly unintentional upon the part of the author. To some of these statements I wish to call attention, not in a spirit of unfriendliness towards anyone, but with the desire to determine the truth in regard to this most vital question.

In the first place, while apparently in opposition to the gynæcological treatment as adopted in the London Asylum* the author stands self-committed to the essential principles that underlie Dr. Hobbs' work. While he appears to ridicule and denounce the application of those principles, Dr. Russell states "while it (gynæcology) has a place among the insane just as it has among the sane for the relief of physical distress," "and I am free to admit that there may exist pathological conditions in the pelvic organs of lunatics which tend to intensify the mental disorder, and in that case the lunatic has the same right as the sane person to surgical aid for its relief." With these admissions he has conceded all that Drs. Hobbs and Burgess state. In Dr. Hobbs' report* these words are used referring to the surgical treatment in the London Asylum: "These operations were done primarily and specifically for the removal of physical disease and the promotion of bodily comfort." I can see no material disagreement between the statements of these two gentlemen.

Again Dr. Russell is not slow in expressing his disapproval of reckless and embryonic surgery as seen in the following quotations; "The specialist in surgical gynæcology . . . proceeds to restore to reason the unhappy victim by unsheathing his scalpel and removing the offending organ"; "he wages his most relentless surgery upon the ovaries." "It is high time for the profession to call a halt in its mad career of pelvic mutilation in order to extol the triumphs of surgery and build up a reputation for surgical skill by imposing upon the ignorance and credulity of the public." With this we all agree, but I fail to see any indi-

*See Dr. Hobbs' report in September PRACTITIONER.

cation of such illegitimate surgery in any of the reports published to date. Surely Dr. Russell does not question the judgment of Dr. Gardiner, of Montreal, who operated on Dr. Burgess' three patients, to say nothing of the work of others. Does not this resemble the proverbial man of straw which has been set up and satisfactorily demolished ? While Dr. Hobbs' report gives his experiences to within a few months ofthe appearance of the report, Dr. Russell's paper is more than fifteen months old and without any additional material, an admission, possibly, that within the last year he has made no further investigations. In the development of any department of science direct effort and personal experience is to be preferred to the opinions of others of equal ability and opportunity; he who investigates further is more apt to be nearer the truth in his conclusions and his opinion will command greater deference. While Dr. Hobbs reports upon one hundred and thirty-six cases Dr. Russell reports upon but three, two of which, if not the third, were operated upon in direct violation of the principles clearly stated by Dr. Hobbs and repeated by Dr. Russell. Now, I ask, should anyone attempt to establish a precedent upon a basis which he himself repudiates? According to Dr. Russell's report two at least of his cases were operated upon "for insanity" without the diagnosed presence of distinct local disease, which is *sine qua non* of all operative procedure.

But the true genius of progress considers less the combating of the old than the development of the new. The makers of history have always struggled through marshes of stagnation and against the popular current. Opposition is an invigorating morsel and its universal result development. The application of modern surgery to the therapeutics of the asylum marks an epoch in Canadian medical history.

Theories may be attractive, but facts are substantial, and we have a few that may be made the basis of new generalizations, the nidus of more reasonable theories. In conclusion, let me ask for an explanation of this fact, that cases labelled "hopeless", "incurable," etc., by asylum superintendents have been restored to mental health within a few weeks from the removal of diseased pelvic structures.

ERNEST HALL,

Meetings of Medical Societies.

LONDON MEDICAL ASSOCIATION.

Minutes of the regular meeting of the London Medical Association, held on the 14th of November, 1898. Present: Dr. Eccles, the president, in the chair, and Drs. Moorhouse, Hodge, Meek, Roome, Wishart, Neu, Ovens, Stevenson, Bayly, Kingsmill, and English.

After the reading and approval of the minutes of the previous meeting, Dr. Neu read a most interesting paper on "Impressions received on a recent European trip." (See page 705).

Drs. Moorhouse, Ferguson, Roome, Kingsmill, and Eccles discussed the paper and urged that the Board of Aldermen of the city be approached early in the coming year and the matter of the appointment of a bacteriologist in connection with the Health Department of the city strongly urged.

Dr. Hodge gave notes of an interesting case. (See page 709.)

The paper was discussed by Dr. Moorhouse, who stated that after fifteen years of careful investigation he believed that the majority of the cases of idiopathic pleurisy were due to tubercle.

Dr. Ferguson thought that this might be a case of choleraine, as many of this characteristic occurred in '95.

Dr. Neu believed that the rapidity of onset, several cavities being rapidly affected, did not point to tubercle as the cause.

Dr. Roome had found that under twenty years of age pleurisy was not usually due to tubercle, but over forty years of age it was present in nearly every instance.

Dr. Bayly suggested liathiasis or oxaluria as the possible cause.

Dr. Eccles believed the case to be toxæmic—the line of

treatment accidentally adopted proved this to be a probable cause: renal inadequacy might be present without albuminuria.

Dr. Hodge made reply.

After a discussion on arrangements for the new hospital, and also the use of the new ambulance in the transfer of typhoid fever cases, the meeting adjourned.

W. M. ENGLISH,
Rec.-Sec'y.

TORONTO PATHOLOGICAL SOCIETY.

(Continued from last issue.)

SECONDARY TUBERCULOSIS OF THE INTESTINE—DR. RUDOLF.

The case was that of a girl aged eleven years, who had been suffering from pulmonary phthisis for about a year, and during the last few months of life had very persistent diarrhœa with occasional passage of blood.

At the *post-mortem* examination the lungs and bronchial glands were found to be extensively affected with tuberculous disease.

The stomach and duodenum were free from lesions, as was also the jejunum.

The caput carcum coli was extensively ulcerated, so much so that no healthy mucous membrane remained, and the walls were much thickened and formed a mass which could easily have been felt through the abdominal wall. The lower part of the ileum was thickly studded with ulcers, and these became more scattered upward. Below the caecum, the ulcers also became more discrete, and the lowest one occupied the upper part of the rectum. It was a recent one, and had evidently been bleeding. The floors of the ulcers were rough and the margins were thickened and as a rule undermined. In the ileum they largely occupied the position of the Peyer's patches. There was no perforation of the intestine nor any adhesions to the surrounding structures. The mesenteric glands were extensively involved, as occurs in the majority of these cases Tubercular ulceration of the intestine is a very common complication of chronic tuberculosis, occurring in 566 cases of this disease out of 1,000 examined at the Munich Pathological Institute. According to Clifford Allbutt, rather more than half of all cases dying of phthisis are complicated with the condition. The disease may occur in three ways: (1) Primary, (2) secondary, and (3) by

direct extension. Of these three varieties the secondary are by far the commonest. In the 1,000 Munich cases only one was primary, and Fagge says that probably tubercular ulceration of the intestines is never seen in the *post-mortem* room without the lungs being likewise affected with active tuberculosis. Woodhead points out, however, that it may occur in children, and there is much experimental proof that it may be the result of milk infection.

As regards the parts of the alimentary tract affected by the disease, the reason why the stomach and duodenum nearly always escape is probably because of the acid secretion of the former. Most commonly the ileum and colon are both affected, the most frequent site being about the ileo-caecal valve. Out of 250 cases collected by Frerich of chronic tuberculosis, 83 per cent. had the disease in the intestine. In these the ileum was affected in 200, the colon in 115, and the rectum in eighteen. Bristowe, however, states that it affects the large and small intestines with equal frequency.

In the specimen presented to-night a number of the ulcers had distinctly undermined edges. This condition is not infrequently seen, and yet most of the standard works on Pathology and Medicine describe the edges of tubercular ulcers of the intestine as never being undermined.

Discussed by Drs. Cameron and Anderson.

Dr. Amyot gave notes and *post-mortem* report of a case of malignant endocarditis with infarctions in the various organs.

Age 21. Admitted in February, 1898, with cardiac disease. Gave history of previous severe attacks of rheumatism. Had an attack whilst in the hospital and showed both mitral and aorticincompetency. Culture from blood during March negative. In July an abscess developed in one leg below the knee. Pure streptococcus culture. Blood showed same before opening abscess. Died about August 15th.

Post-mortem report: Abscess in legs extends up amongst muscles of thigh; part of femur bare; heart enlarged—all cavities much dilated; much hypertrophy, weight 28 ounces; infarct at apex, yellowish grey in colour; other small ones in smaller branches of the coronary artery; one over the right auricle muscle greyish, ill-defined elements; aortic orifice dilated; some thickening of the semi-lunar cusps; polypoid vegetation on edges, also on aortic side of mitral cusp; none in mitral blood surface; firmly adherent clot in endocardium of apex of left ventricle; retention band in right ventricle marked; spleen weight 14½ ounces, and both kidneys show

irregular retracted scars and recent infarcts, anæmic, with well marked hemorrhagic borders.

A lengthy discussion followed on the pathology of infarction by Drs. Anderson, Cameron, Graham and Parsons.

The meeting then adjourned.

H. C. PARSONS,
Recording Secretary

Book Reviews.

A Text-Book of Pathology. By Alfred Stengel, M.D., Instructor in Clinical Medicine in the University of Pennsylvania, etc., etc. Philadelphia: W. B. Saunders.

This is one of the text-books which we would rather had not been written and that chiefly for the sake of the author. Dr. Stengel is capable of something much better. The book has the appearance of having been put through by force of circumstances, within a period of time too short for such work. We cannot go into details, but would merely say that what is there is mainly good, but that much is lacking for a volume of such a size and pretence. Can Messrs. Saunders not be persuaded to give Dr. Stengel a chance to do the thing properly? The make-up of the volume is what might be expected from so good a firm.

A Manual of Venereal Diseases. By James R. Hayden, M.D., Chief of Clinic and Instructor in Genito-Urinary and Venereal Diseases, College of Physicians and Surgeons, New York; Professor of Genito-Urinary and Venereal Diseases in the Medical Department of the University of Vermont, etc. New (2nd) edition, revised and enlarged. In one 12mo. volume of 804 pages, with 54 engravings. Cloth, $1.50 net. Lea Brothers & Co., publishers, Philadelphia and New York.

This little work is very concise, rather too much so we believe. It reviews the whole range of venereal disease and is undoubtedly popular. The new chapter added in this edition on "care of instruments" would be improved by mention of the use of formalin in vapor to sterilize sounds, catheters, both soft and metal. We can recommend the work to students and practitioners. The publishers have illustrated the work well and freely.

Doctors Harney and Davidson's Syllabus of Materia Medica. Revised in accordance with the "British Pharmacopœia," 1898, by William Martindale, F.L.S., F.C.S., member of the Council of Pharmaceutical Society, etc. Tenth edition. London: H. K. Lewis, 136 Gower Street. Toronto: Carveth & Co., Parliament Street. Price, $1.00 nett.

This syllabus is a most useful book for the medical student in preparation for examination, used in conjunction with his materia medica and therapeutic treatise. It familiarizes one with the dosage, all the

official B.P. preparations and is revised absolutely up to date. There is no work that so concisely puts dose in both imperial and metric system.

CONSERVATIVE GYNÆCOLOGY AND ELECTRO-THERAPEUTICS. A Practical Treatise on the Diseases of Women and their Treatment by Electricity. By G. Bilton Massey, M.D., Physician to the Gynæcological Department of Howard Hospital, and late Electro-Therapeutist to the Infirmary for Nervous Diseases; Fellow and ex-President of the American Electro-Therapeutic Association; Member of Société Francaise d'Electro-Thérapie, American Medical Association, etc.

Third edition, revised, re-written and greatly enlarged. Illustrated with twelve original full-page chromo-lithographic plates and twelve full-page half-tone plates of photographs taken from nature, and numerous engravings in the text. Philadelphia, New York and Chicago: The F. A. Davis Co., publishers. 1898.

That Massey is a firm believer in the efficacy of electricity in gynæcology one has only to glance at the book to see. That he is an enthusiast or sees diseases of women through the spectacles of the specialist one has not to read far or ponder deeply to know.

Vaginal and intra-uterine galvanic and faradic applications and the apparatus necessary are considered. Menstrual derangements are taken up in Chapter VII., and it seems that electricity is equally useful in amenorrhœa, menorrhalgia, menorrhagia, metrorrhagia or dysmenorrhœa.

While we are willing to concede that chronic mitritis may be favorably influenced by electricity, we are loth to believe that it is the best or greatest method of treatment. "For a septic condition of the uterus the positive mercuric pole is the most satisfactory, owing to its distinct bactericidal powers, and, if the foul discharge comes from only small shreds of retained membrane or clots, it is quite unnecessary to resort to the risks and loss of blood attending the use of the curette." To such teaching we must enter a protest. Electricity is quite safe here, we admit, but the dull curette, guided by educated fingers, is just as safe and more effective. The author cites cases of pyoselpinx as cured by electricity, but here, too, surgery would be preferable we are convinced.

The diagnostic test treatment, indicated by Apostoli, for the purpose of deciding what cases of chronic ovaritis should be treated by electricity and what by operative procedures, is quite ingenious and well worth careful attention.

In regard to fibroid tumors the selection of suitable cases, the contra-indications to the use of the remedy, the various methods and the result of treatment, are discussed. Of seventy-five cases in which a definite history is known, 85.33 per cent. of cures is claimed and 14 66 per cent. failures. He declares "if electricity does no good it can be relied on to do no harm in proper hands, leaving the tumors unchanged for the trial of other methods." We are scarcely prepared to agree to all of this. More than one death has occurred in this city as the result of electricity *per se*. In other cases a train of evils has been set up in-

finitely worse to bear and more dangerous than the original trouble. We repeat, it is not without danger, but in the hands of an electrician of the well-known ability of the author it is certainly robbed of some of its dangers.

Electricity is, of course, advised in extra-uterine gestation, and the author quotes eighty-six cases with only six deaths.

The book is the largest of its kind, contains 136 illustrations and 24 full-page plates. The motor points of the nerves and muscles are graphically shown on the person of a professional model photographed.

The typography, binding, cuts, photogravures, etc., reflect credit on the publishers.

A Text-Book on Practical Obstetrics. By Egbert H. Grandin, M.D., Gynæcologist to the Columbus Hospital; Consulting Gynæcologist to the French Hospital; late Consulting Obstetric and Obstetric Surgeon of the New York Maternity Hospital; late Obstetrician of the New York Infant Asylum; Fellow of the American Gynæcological Society, of the New York Academy of Medicine, of the New York Obstetrical Society, etc.; with the collaboration of George W. Jarman, M.D., Gynæcologist to the Cancer Hospital, Instructor in Gynæcology in the Medical Department of the Columbia University; late Obstetric Surgeon of the New York Maternity Hospital; Fellow of the American Gynæcological Society, of the New York Academy of Medicine, of the New York Obstetrical Society, etc. Second edition, revised and enlarged; illustrated with sixty-four full-page photographic plates, and eighty-six illustrations in the text. The F. A. Davis Company, publishers, Philadelphia, New York, Chicago, 1898.

Two years ago the first edition appeared, and now the second comes revised and enlarged. The revision has resulted in the condensation of "two volumes in one" with a separate index for each volume—one in the middle, the other at the end of the work—into a single volume with one index, a matter of no little convenience on looking up a subject. The revision of the index has not been to the advantage of the reader; while pelvimetry and pelvimeters are considered in the text neither are mentioned in the index. This is one illustration of the result of revision. The publishers tell us the work is enlarged, as a matter of fact it is by two pages—a point hardly worth mentioning.

This edition, like the former, is profusely illustrated, a desideratum to the proper understanding of either theoretical or practical obstetrics. Two new illustrations in regard to symphysiotomy made the operation clearer than some of the articles in recent journals do. E. A. Ayres' method—the subcutaneous method—and his directions are so well and systematically arranged that they may with advantage be studied by any one who contemplates the operation. His apparatus for use after symphysiotomy is very ingenious. Eight new full-page plates are added to the present edition, four of which refer to axis-traction forceps, showing correct and faulty traction. These and the great majority of the plates and illustrations are all that can be

desired, and they help to clear up many a hazy point in the brain of the student or practitioner, who imbibed his obstetrics before the days of illustrations. But we do find fault with such plates as Nos. xxx., xxxi., xxxii., showing the finger in the rectum for the purpose of maintaining flexion and promoting extension. While this method may once in a long time be necessary, its routine use must certainly be conducive to septic infection. It is one thing for such men as the authors of the work—obstetric specialists—men who know how to take care of the hands, to practise flexion and extension by the finger in the rectum on rare occasions, but to teach it to students and advise it to gene al practitioners is quite another thing and very much to be deprecated. The following sentence shows that the finger inserted into the rectum is intended not as occasional but as routine practice ; "The thumb applied to the head and, if need be, the index finger inserted into the rectum, in order to enable extension to be of the most gradual type, is the proper way to deliver the head, under normal circumstances." Such teaching is wrong in theory and worse in practice. The desired end may be obtained by other and safer means. We should be very sorry indeed to feed the newly-born infants, in even this bracing climate, on the food advised by the authors, where the mother is for any reason unable to nurse her baby. We had thought the days of French gelatine, arrow-root, and 50% milk were matters of ancient history. But it seemeth not. This portion of the work would serve a more useful purpose if omitted entirely in future editions. At least it would bear "revising" again.

Both type and paper are an improvement on the former edition.

DISEASES OF WOMEN. A Manual of Gynæcology designed especially for the use of Students and General Practitioners. By F. H. Davenport, A.B., M.D., Assistant Professor in Gynæcology, Harvard Medical School ; Assistant Surgeon to the Free Hospital for Women, Boston. Third edition, revised and enlarged, with 156 illustrations. Lea Bros. & Co., Philadelphia and New York, 1898.

This little work of 388 pages contains an amount of information which is simply amazing. It is methodically arranged, very well adapted to the use of students, and so clear that the busiest general practitioner can see at a glance almost any disorder on which he wishes information. As the author states, it is not intended for the specialist, but, we believe the family physician will be able to get light on any point he elects to look up—certainly on any case which he should take charge of and treat throughout, without the advice or assistance of the specialist. We are particularly pleased with the advice as to when and where not to make an examination, and also the suggestions as to the examination of young girls. "Here an examination should be avoided, if possible." This sentiment, which, alas, too seldom appears in works on gynæcology, so corresponds with our own feelings that we quote the line.

The book is evidently the work of a teacher, is freely illustrated,

and may be profitably, though not exclusively, read by the busy physician, as well as the student.

The work is presented in the unusually good manner by the publishers.

ACCIDENT AND INJURY, THEIR RELATION TO DISEASES OF THE NERVOUS SYSTEM. By Pearce Bailey, A.M., M.D., Attending Physician to the Department of Correction, and to the Almshouse and Incurable Hospitals; Assistant in Neurology in Columbia University; Consulting Neurologist to St. Luke's Hospital. New York: D. Appleton & Company. Toronto: G. N. Morang.

This work will be welcomed as one that will undoubtedly fill a niche. It is clearly and concisely written, and reviews the nervous sequelæ following accidents in a most instructive manner. The chapters on Hysterical Joints and Traumatic Neurasthenia are very interesting. The greatest benefit from the work will, however, be to those practitioners who are called on to attend people injured and about to enter litigation. It is most important that the physician should be able to interpret the patient's condition, and not be carried away with sympathy nor allow his patient to mislead his legal adviser. Patients receiving injuries in railway accidents are always worse previous to and during any action, and, strange to relate, frequently recover from conditions supposedly and sworn to be permanent and incurable. It is rare to find physicians agree in the witness box on prognosis. It is also rare to find physicians who can speak with the authority of experience, and to meet these requisites this work will be most useful. The subject matter of this volume was, up to its appearance, not available except in widely-scattered monographs, and these largely in foreign languages. Here they are embodied and done by an able author. The work was needed, and is one that should be widely read and kept for reference. The publishers have carried out their share of the work in the usual elegant style that predominates in the house of Appleton. We highly recommend the volume.

Books received

A TEXT-BOOK OF OBSTETRICS. By Barton Cook Hirst, M.B., Professor of Obstetrics in the University of Pennsylvania; with 653 illustrations. Philadelphia: H. W. B. Saunders, 925 Walnut street. 1898.

F. STEARNS & CO.'S PHARMACEUTICAL CATALOGUE.—This firm, which has been established fifteen years in Windsor, has issued a new catalogue, which is a most useful book to be possessed of. It gives one a very complete idea of the thoroughness with which the firm does its work. The work contains a Practical Scheme for Urinalysis, Poisons and Antidotes, Percentage in Solution, Doses, Rules for Proportioning Doses, etc., and will be sent free on application.

brigade to attend the lectures given under the auspices of the association. Dr. Ryerson mentioned the interesting fact that the plot of land in Jerusalem recently presented to the Emperor of Germany, Prior of the German Order of St. John, is the identical location upon which the original Knights of St. John erected their first "hospice."

The Hon. Secretary, Dr. Charles R. Dickson, reported that six first aid classes, with 137 pupils; three nursing classes, with 64 pupils; one first aid junior class, with 36 pupils; one medallion class, with 5 pupils, had been held in Toronto during the year. Of the 243 pupils, 188 completed the course of lectures and 145 passed the examinations. The record of work since the organization of the Toronto Centre in February, 1896, shows a total of 32 classes; 646 pupils completed the course, 473 of whom went up for examination and passed, and of this number 23 have succeeded in passing the second and third examinations and obtained the medallion of the association.

The employees of the street railway have formed a separate class, and a large number of the members of the Toronto Police Force, no fewer than 182 out of 250, have obtained certificates.

YUKON PHYSICIANS AND SURGEONS.

THE establishment of a College of Physicians and Surgeons and the election of a council for the same, have taken place. There were some twenty-five Canadian practitioners in Dawson and vicinity and a number of American physicians who were practising in spite of the N.W.T. Ordinance. The Canadians found it necessary to incorporate themselves into a legal body for the purpose of protection and mutual help.

At the election held on the 5th of October, 1898, the following gentlemen were elected members of the Council of the College of Physicians and Surgeons of the Yukon Territory:

President, E. D. Dunn; Vice-President, R. R. Macfarlane; Registrar, A. F. Edwards, and J. W. Good and H. H. Hurdman.

The first examination was announced for October 15th, 1898, and the following examiners were appointed:

Surgery, J. W. Good and E. L. Barratt; Medicine, R. R. Macfarlane and E. G. Scott; Midwifery and Gynecology, E. P. Thompson and W. G. Hepworth; Medical Jurisprudence and Sanitary Science, J A. Sutherland and W. A. Richardson.

Since the Ordinance assented to by the Executive Council

an amendment has been added, which allows all bona fide medical practitioners practising in the Yukon Territory at the date of the establishment of the College of Physicians and Surgeons who were able to produce certificates of having attended a Medical College for three years and a diploma of qualification from the same, to be eligible for admission to the College of Physicians and Surgeons upon passing an examination and paying one hundred dollars to the Registrar. This amendment holds goods only until the close of the first examination.

As it now stands the regulation with reference to the practice of medicine in the Yukon Territory is, in brief, that (1) licentiates of Quebec, Manitoba, and the Northwest Territories are eligible to practise medicine in the Yukon Territory on the presentation of their licenses and the payment of a fee of one hundred dollars; (2) those who can present certificates of attendance for four years or a diploma of qualification from a recognized school of medicine are eligible to practise in the Yukon Territory upon passing the examination of the Medical Council of the Territory and the payment of one hundred dollars to the Registrar.

PARKE, DAVIS & CO.'S PRICE LIST.—We cannot deny that the highest praise is merited by the last edition of Parke, Davis & Co.'s Priced Catalogue. It was prepared in Canada, printed in Canada, and embodies an array of nearly five thousand preparations, every one of which is manufactured at the Walkerville Laboratory of this great house. Not alone does this list set forth formulæ and prices of each item in the twenty-nine extensive lines manufactured by Parke, Davis & Co., but it also contains in convenient form a vast fund of information which makes it permanently valuable for purposes of reference. Thirty-five pages are devoted to a most useful "property and dose list" of drugs from which Parke, Davis & Co. manufacture a fluid, solid, or powdered extract or concentration. Every paragraph in the eighteen pages on "Notes of Reference" is a valuable nugget of information. The list is compactly and handsomely printed, and is sent without charge to every physician who asks for a copy. Do not fail to write for one of these catalogues, and when you get it keep it within easy reach, for it will answer a thousand queries relating to drugs, their uses, doses, prices, and pharmaceutical preparations.

MULFORD'S NEW BROCHURE.—We are in receipt of a copy of Mulford Company's 1898 Antitoxin Brochure recently from the press. It is a great improvement on that of last year, for which there was an unexcelled demand, and is a valuable reference book for physicians. The subjects of antitoxin dosage, symptomatic treatment of cases seen later and immunization are the best and fullest ever given. There is a novel and valuable section on official reports on the use of antitoxin, which will be highly appreciated. The book is handsomely finished, and is easily without parallel in trade literature. It should be in every physician's office. The book will be mailed gratis upon receipt of request.

A TREATISE ON "UNRIPE" CATARACT. By William K. McKeown, M.D., M.Ch. Surgeon to the Ulster Eye, Ear and Throat Hospital, Belfast; member of the Senate of the Royal University of Ireland; Lecturer, etc., etc., Queen's College, Belfast. Illustrated with nine plates and sixty original drawings. 202 pages, 8vo. Price, 12s. 6d. net. London: H. K. Lewis, 136 Gower street, W.C.

We have received the AK. Skel tón Calendar for 1899 It is another of those interesting series of Skeleton Sketches by the late Dr. L. Crusins. Any physician who has not received one will have one forwarded on request to the Antikamnia Chemical Co., St. Louis, Mo.

E. B. Treat & Co. announce that, with the January, 1899, number, they become the sole owners of *Archives of Pediatrics*, having purchased the interest of its founder and former owner, William Perry Watson, M.D. The *Archives* completes its XVth Volume with 1898, and is today the leading journal devoted to pediatrics.

Medical Items.

DR. J. M. JORY, of Bloomfield, has returned from a post-graduate course to New York.

DR. JOHN P. MORTON (Tor. '97) has recently returned from Vienna and commenced practice as a surgeon of the eye, ear, nose, and throat in Hamilton.

DR. THOMAS S. CULLEN (Tor. '90) is engaged in private practice in Baltimore. His monograph on Cancer of the Uterus will shortly appear, being published by Appleton & Co.

DR. W. T. CONNELL, Professor of Bacteriology, Queen's University, Kingston, had a serious septicæmia from post-mortem work last month. We are glad to be able to announce that he is recovering.

DR. THOMAS B. FLETCHER (Tor. '93) has been appointed first assistant in the medical clinic of St. John's Hospital, Baltimore: Dr. Thos. McCrae (Tor. 95) has been appointed second assistant: Dr. Norman B. Gwyn (Tor. '96) has taken charge of the clinical labor atory

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A BACTERIOLOGICAL TRAGEDY.

A gay Bacillus, to gain him glory,
Once gave a ball in a laboratory.
The fete took place on a cover glass,
Where vulgar germs could not harass.
None but the cultured were invited,
(For microbe clicks are well united),
And tightly-closed the ball-room doors,
To all the germs containing spores.
The Staphylococci first arrived—
To stand in groups they all contrived—
The Streptococci took great pains
To seat themselves in graceful chains.
While somewhat late, and two by two,
The Diplococci came in view.
The Pneumococci, stern and haughty,
Declared the Gonococci naughty
And would not care to stay at all
If they were present at the ball.

The ball began, the mirth ran high,
With not one thought of danger nigh.
Each germ enjoyed himself that night,
With never a fear of the Phagocyte.
'Twas getting late (and some were "loaded,")
When a jar of formaline exploded,
And drenched the happy dancing mass
Who swarmed the fatal cover glass.

. . . .

Not one survived, but perished all
At this Bacteriologic ball.

—*J. Lee Hagadorn, M.D., in Southern California Practitioner.*

Obituary.

Sir William Jenner, K.C.B.—Sir William Jenner, the distinguished pathologist and physician-in-ordinary to the Queen and Prince of Wales, died Dec. 12, 1898.

He was born at Chatham in 1815, and was president of the Royal College of Physicians from 1881 to 1889, when he retired from the practice of his profession. He was first to establish beyond dispute the difference in kind between typhus and typhoid fever.

On the death of Dr. Baly, in 1861, Jenner was appointed to succeed him as physician extraordinary to the Queen, and the next year he was gazetted physician-in-ordinary to Her Majesty, receiving the same preferment in 1863 in the household of the Prince of Wales. It was in recognition of his services rendered during a severe illness of the Prince that he was made Knight Commander of the Bath. He wrote numerous papers on fever, the acute specific diseases, diphtheria, diseases of children, and diseases of the heart, lungs, and skin.

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